

BORDERLANDS

THE CROSSROADS OF SCIENCE & SPIRIT

Volume XLIX, Number 4, Fourth Quarter 1993

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Editor-in-Chief

Thomas Joseph Brown

Associate Editor & Production Assistant

Alison Davidson

Associate Editors

Peter Lindemann & Michael Theroux

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IS IT ME, OR WHAT???

When the media reported that the latest Mars mission failed as it reached the planet I laughed in disbelief! It has to have been either shut down, or switched to a propagation mode outside of available civilian technology. To top it off, *another* earth-orbiting satellite failed the same day—one of the many, many satellites that have “failed”. At one time I kept a count of satellites that failed to make it to a higher orbit. I always thought, “hey, what a great way to get a batch of low-orbit surveillance satellites into operation”. The Germans would have reached the Moon by the late 1940s without WWII interfering, so the technological capacity to do things right has existed from before my birth. Something’s up, somebody does not want us into space, or really even thinking about it. Is it just me? Am I overly suspicious of a long stream of irregularities concerning available information about space? Let me know what you think ... Thanks!!!

Tom Brown, Editor-in-Chief

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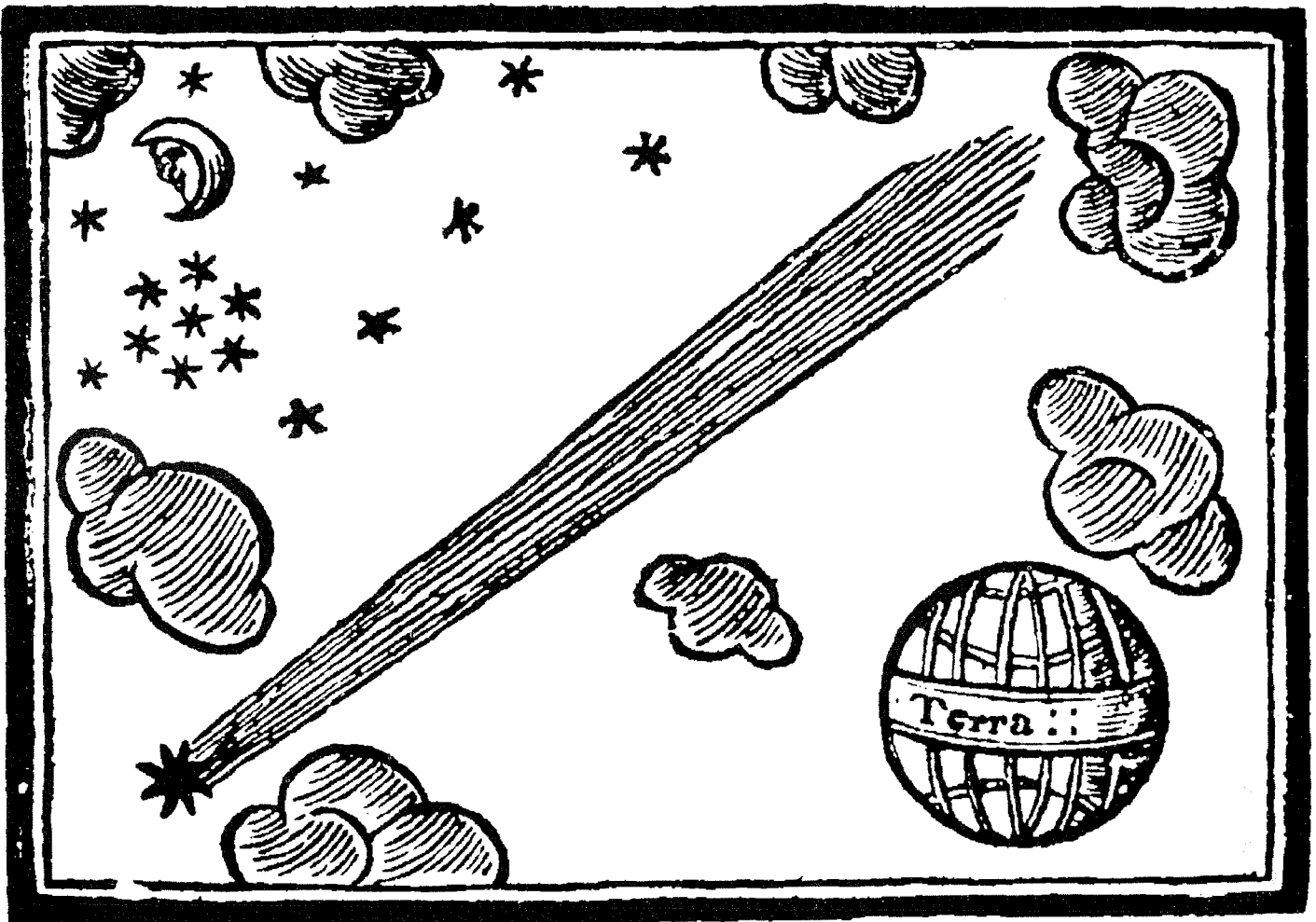
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THE BEARD OF VENUS

by Richard Petersen

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THOUGH BANISHED from popular discourse because of its embarrassing implications, the erstwhile beard of Venus is a matter of the most profound significance. We owe its resurrection in modern times to Immanuel Velikovsky who searched out the historical references and interpreted them almost correctly in his book, "Worlds in Collision" (1). He placed in evidence a host of seemingly fanciful ancient legends from around the world which name Venus as an anomaly; it was said to have the attributes more of a comet than a planet. In short, Venus appears to have worn a beard in ancient times.

In addition, Velikovsky cited Babylonian clay tablets containing records of actual Venus sightings continued over many years. These observations indicate a highly irregular motion for the planet—so irregular in fact that modern authorities consider the records corrupted. He, however, interpreted these data to mean that the planet was originally a comet which invaded our solar system and was forced into its present stable orbit through a series of gravitational interactions with the other planets.

The great weakness in this picture is that the mass of Venus is totally inconsistent with masses observed for comets. In fact, the mass of Venus is only slightly less than that of our own Earth whereas no mass whatever has ever been discerned in a comet. Let it be noted that the masses of celestial objects are deduced from the strength of their gravitational interactions. But no moon or planet has ever been observed to respond in any way to the passage of a comet. Their masses, then, are essentially zero on this scale of measurement.

According to the prevailing view, comets are condensed aggregates of the primordial matter from which our solar system originally formed, namely dust and frozen volatiles—hence the oft-heard description, “frozen snowballs”. The picture, then, is that when one of these frozen objects draws close to the sun the exposed ice evaporates to produce a gentle wind blowing outward from the core, the liberated dust being carried along with the breeze. Ultraviolet light from the sun causes the gases to fluoresce and emit a bluish light which forms a kind of halo around the center whereas the dust particles reflect the sunlight directly. These constitute the so-called gaseous tail and the dust tail respectively.

One problem with this picture, among others, is that no such snowball nucleus has ever been seen (let alone resolved as a distinct image)—even with the most powerful of telescopes. In an earlier work (2) I point out that this problem can be overcome by assuming that comets are exactly what they appear to be; they are empty regions of space which give forth gas and dust in profusion. Although our understanding of such a circumstance may be sorely limited, we do have words in the language to describe it. Namely, we conceive of an added dimension of space, and we say that the gas and the dust enter our worldly plane along this other dimension.

More recently, in 1986, a rocket-launched space probe, “Giotto”, intercepted Halley’s comet and returned copious physical measurements of the evolved gases and fairly good photographs of the nucleus. Of course the physical properties of the gases have no bearing on the structural question so we need be concerned here only with the pictures. These show a vague, stark black “peanut shaped” body measuring some eleven miles in the long direction and enclosing a volume of about 26 cubic miles. Strangely enough, it emitted its gas and dust only from a few well-defined jets while the remainder of the surface (some 90% of it) was entirely inactive.

Presumably one would expect a “hole in space” to be completely invisible. But in the process of emitting debris into our space it would be rendered visible by the debris itself—even as the invisible man of fictional fame was rendered visible by donning a suit of clothes and wrapping his head in bandages. One would have no basis for anticipating just how this “nuclear clothing” would appear, but the object in the pictures seems agreeably bizarre. On the other hand we do have an idea what to expect of a dirty snowball—or at least what not to expect. In particular, we would not expect it to evolve its dust and gases in the form of well-defined jets from a small part of its surface. A detailed review of the Giotto results may be found in reference (3).

How should one expect an object of this kind to behave on colliding with a massive body such as a planet? Or perhaps the first question should be: Would it collide at all? If it does indeed lie in a parallel universe then might we not expect it to pass right through the massive body and be totally unaffected? But clearly it does not lie entirely within a parallel universe because it emits material into our own. Presumably these objects are caught in an “in between” state so some kind of interaction might be expected after all. Moreover, it is accompanied by material which has already been emitted into our space—the nuclear clothing already mentioned, and this might well impact explosively if its mass were sufficiently great.

Reason fails at this point so in order to continue let us turn to experience as a guide. Namely, let us cast about for an otherwise inexplicable set of circumstances such as might possibly be traced to an interaction of this kind.

One plausible candidate for this first study is to be found in the loess because, as is plainly evident upon critical examination, the production and laying down of this material did not follow the normal laws of physical behavior. Clear specific evidence shows that the silt and other components “materialized out of thin air” and fell gently to earth (see Reference 2, Chapters 7 and 8). That is to say, it entered our worldly plane along an added dimension of space even as the dust of comets enters our worldly plane. It is therefore only a small step to conclude that the loess arose from the collision between the Earth and a comet.

Just what is the loess? Briefly stated, it is a massive deposit of uniformly fine silt having several specific characteristics which needn’t concern us just yet. It is found in the mid-western United States, central and eastern Europe, and in Asia—most notably China, where it covers close to a million square miles. It is always the topmost layer of deposit, and in all cases it covers the preexisting landscape like a blanket—in some places to a depth of several hundred feet. Because it covers hill and valley alike, even as a heavy snowfall, it is widely admitted to be an airborne deposit. Furthermore, since these various deposits share the same characteristics, one is almost forced to conclude that they came from the same source—and quite a source it was for their volume comprises several thousands of cubic miles in all.

Now if this silt did result from a collision with a comet then several surprising facts can be deduced about the event. For one, there was no significant explosion on impact such as would have resulted if the comet had carried kinetic energy appropriate to this great mass of material in motion. That would have been a catastrophe indeed, and the residues would be unmistakable. Even more surprising, one would have to conclude that the comet did not penetrate the Earth but came to relative rest somewhat above its surface. In this case, it must have survived for a time intact while it poured out its store of dust and moved fitfully hither and yon over the northern hemisphere—quite surprising behavior indeed!

Viewed safely from afar that would have been an awesome spectacle, but in order to avoid leaning too heavily on unfettered imagination let us turn again to history and ancient tradition for guidance. Plato’s Dialogues (in *Timæus*, as translated by

Donnelly in Reference 4) provide two suggestive candidates for study—but first let it be noted that Plato drew here on his own family tradition which extended back some two hundred years to his ancestor Solon, the great Athenian lawgiver. Solon, who flourished about 600 years B.C., derived his understanding in turn from Egyptian priests during a visit to their land in his youth.

The priests chided Solon for the childishness of the Greeks—in the sense that they had no ancient history, whereas the Egyptians had written records going back many centuries. On the strength of these ancient records they were able to tell Solon about a powerful nation which formerly dwelt on an island in the Atlantic a few hundred miles (by interpretation) beyond Gibraltar. Let us now examine some of these tales. To begin with, in Reference (4) on page 10 we find this: "... This power came forth out of the Atlantic Ocean, for in those days the Atlantic was navigable, ...".

Evidently, then, in Solon's day the Atlantic was not navigable—at least in the vicinity of Gibraltar, and this is corroborated a little further on (p. 11) where we find this: "... But afterwards there occurred violent earthquakes and floods, and in a single day and night all your warlike men in a body sunk into the earth, and the island of Atlantis in like manner disappeared, and was sunk beneath the sea. And this is the reason why the sea in those parts is impassable and impenetrable, because there is such a quantity of shallow mud in the way; and this was caused by the subsidence of the island."

This is absolutely fascinating, but I would suggest that the Egyptians were confused about the cause of this tragedy. From our point of view it seems more likely that the island of Atlantis was buried under a heavy fall of dirt, and it was this same dirt falling into the ocean west of Gibraltar that temporarily blocked off the sea to shipping. Since the profile of the floor of the Atlantic offers little hope that an island of any size is to be found sunk beneath the waves, I would suggest that it is more likely to be found buried under western Europe or Africa instead!

Shortly before this, on page 8, the priest called Solon's attention to the legend of Phaëton, which even the Greeks had preserved—Phaëton being identified as the son of Helios, god of the sun. The tale seems pertinent to our topic because it alludes to a prodigious phenomenon in the sky. Namely, it is said that on attaining to manhood Phaëton desired to drive the chariot of the sun across the sky. For a long time the father refused to allow it because practiced control was required in order to keep the horses on a steady and even path. However, the father relented

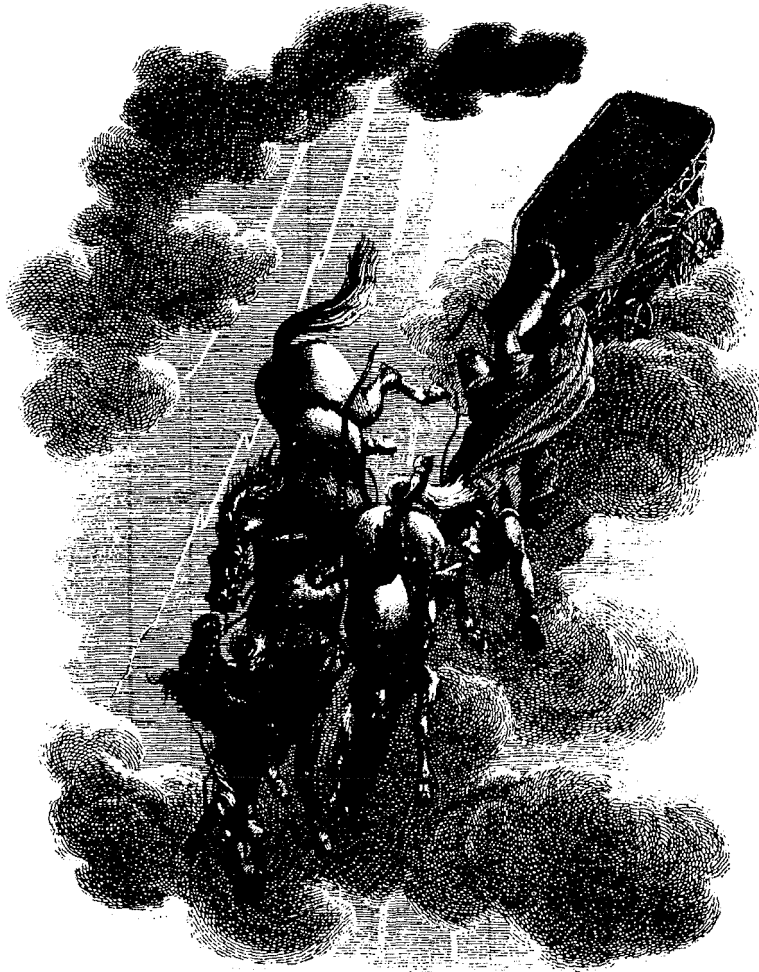
eventually, and after giving his son detailed instructions, he sent the young man on his way. One can already guess how the story ends. The lad lost control of the horses so they pulled the sun erratically and departed from the proper course. Moreover the chariot dipped too close to the earth, and scorching calamity was the result.

No one knows the origin of this legend or its date, but Velikovsky (p. 149) cites ancient authors to support the idea that the conflagration of Phaëton occurred during the lifetime of Moses and before the Exodus of Israel out of Egypt. Speculations as to date are helpful in formulating a mental picture of events, but they are not of great importance here. Our main interest lies in the phenomenon itself.

This spectacle of an errant sun calls to mind events reported in the Book of Joshua some 41 years following the Exodus. In Chapter 10, starting at verse

12, the text describes the "longest day", wherein the sun and the moon stood still in the midst of heaven for about the space of a whole day. Being somewhat skeptical I do not believe that the Earth did, in fact, cease its rotation for a time and then start up again. Nevertheless a visual effect of this kind might easily be traced to a phenomenon similar to that which gave rise to the legend of Phaëton.

This is made all the more probable by a tradition of the Quiché Mayans of Central America reported by Carmack (5). This author cites (p. 129) a colonial source to the effect that, on an occasion in the dim past, the Quichés saw three suns in a



Phaëton crashing towards earth in the Solar chariot after racing recklessly and erratically across the sky.

single day. Because such a spectacle must be exceedingly rare this may well have been the same event as recorded by Joshua, but it hardly matters in any case. The main point is that anomalous "suns" have been observed more than once even if they have not been properly understood.

In keeping with old and accepted principles let us avoid "adding new tools to our kit" and try to make do with what we have while attempting to account for this phenomenon. In that case, presumably we must identify those hot, glowing orbs with the objects that we perceived earlier raining the loessian silt upon the earth. Namely, they were comets which had become captured in some way after colliding with the Earth. From the absence of an identifiable impact crater we deduced that this comet carried very little kinetic energy and hence manifested very little mass. Now we see that the apparent mass was indeed small since the object seems to have been supported in the atmosphere merely by the buoyant effect on the heated gas pervading it—the original hot-air balloon!

But if indeed these objects were truly comets then their unexpected appearance deserves some comment and attempt at reconciliation. That is, in their natural state comets have no light of their own whatever; they are rendered visible solely by the light of the sun as already explained. I am sensitive to the folly of presuming to understand beyond the five senses, but I might suggest tentatively that kinetic energy was associated with the relative motion after all. And since the massive portion of the comet lay outside of our frame of reference then so also did the converted energy. For this reason no explosion resulted at impact, but energy was preserved nevertheless and became manifest in the dust and gases as they were released into our sphere. One would like to think that momentum was conserved in some manner as well, but I would not venture to speculate how that might have been.

At this point it requires no great feat of daring to ascribe the beard of Venus to a comet which was captured in this same way. One might be confident of this conclusion even in the absence of further corroboration, but recent observations by space probes provide virtual confirmation. In short, we find exactly what would be expected after some two thousand years of a resident "sun" raining dust and exotic gases into the atmosphere. The planet is totally dead; the surface consists largely of windblown sand; the atmosphere is opaque from airborne dust and the surface temperature approaches 900 degrees Fahrenheit!

Thus we have grounds for a measure of confidence, but serious problems remain to be faced nevertheless. If in fact the loess did rain down from a body radiating such destructive heat then we should expect the deposit to be sterile, but such is not the case at all. Buried within the lowest layers of the loess some mammalian remains are to be found—obvious victims of the falling silt. But even within the body of the loess, at all levels, may be found the perfectly preserved shells of snails—locally in abundance!

Certainly these limey shells never experienced any great heat or they would have been destroyed. And the origin of the

snails must also be otherwise accounted for because it seems unlikely that they could have inhabited a comet even if they could have survived the heat during the fall.

Thus have we arrived at an impasse. Apparently we were too hasty in tracing the loess directly to the comet, but fortunately other massive deposits are to be found which are, as it happens, coeval with the loess but which do not contain snails. One understands that they are of similar origin and of identical age because they are observed to grade smoothly one into the other.

But then what is to be said of the loess? At this point I feel compelled to "add another tool to the box" and speculate that the impinging comet set up, as it were, "turbulence eddies" in the borders between this worldly plane and neighboring parallel worlds—with the result that samples from their spheres "leaked through" into ours, although certainly in an altered condition. In fact, the loess has certain properties of a Fortean fall on a grand scale so one might speculate further that the more usual Fortean events could be traced to similar eddies (but on a very much smaller scale) which might be generated in thunder storms.

The nature—or mechanism of these eddies remains to be determined, but presumably they would have to propagate almost as discrete entities. In any case it is a problem worthy of careful attention, the proper resolution of which ought to provide for the nearly identical properties of the widely separated loess deposits.

One might note in passing that the boulder clay deposits in the north central United States and Canada are currently thought to derive from the action of continental ice sheets which advanced and retreated in cycles over the space of perhaps 70,000 years. Because of their intimate association with the loess, however, which we know to have been deposited quickly, the boulder clay must have been deposited quickly as well. In that case the ice age assumption is untenable—so that notable period of seven hundred centuries must collapse into just a few days.

The compelling reason for tracing these clays to glacial action are clear signs of violence found locally in the rocks and terrain. In the absence of specific evidence to reason with, let us tentatively agree that a comet might inflict this kind of superficial damage equally as well—and the nuclear clothing could go further and inflict catastrophic damage if its mass were sufficiently great. In fact, it is my opinion that Donnelly (6) was exactly correct when he concluded (p. 95) that the basins of the Great Lakes were excavated by just such an event. These lakes are, of course, in the midst of the presumed glaciated region and are therefore very plausible residues of that event.

Unfortunately the age of the loess and these other deposits still remains something of a mystery. Radiocarbon ages have been measured for organic material trapped within and under the silt, but they are indeterminate from our point of view since they range from a few thousand years to the extreme limit of the method—some fifty thousand years. But whenever that event took place, there can be no doubt that it happened quickly so all the ages must necessarily agree if the method were working correctly. Since they do not agree then evidently the phenomenon itself undermined the process. Possibly the radioactive

carbon nuclei were even more unstable in that bizarre environment and they decayed away, even during that brief time, leaving a seemingly much older carbon behind. Of course, radiative decay rates are insensitive to environment in the laboratory, but that was certainly not the kind of environment that can be tested in the laboratory,

So at least for the present we can do no better than accept the time frame vaguely suggested by the ancient records. Since all these legends and accounts stem from approximately the same period one is tempted to trace them all to a single root cause, namely, a great comet which by rare chance was perturbed into a close orbit about the sun upon passing close to one of the inner planets—perhaps near the middle of the second millennium B.C.

Now comets have often been observed to divide on passing close to a massive body, resulting in two—or sometimes even several distinctly different daughter comets. The daughters then continue moving along substantially the same path as did the parent comet before the division. Apparently such a breaking up occurred in our case so that at least three comets continued on where there had been originally only one. Even though these three pieces would have started out along the same path, in the course of time they would have drawn apart, and eventually they would have become widely separated owing to their differing interactions with the planets.

My own interpretation of the signs is that the Earth captured one of these small pieces, giving rise first to the conflagration of Phaëton. Then some fifty years later it captured another piece which immediately divided again to give the pair which were interpreted as the sun and the moon in Joshua's time. One of these events presumably resulted in the burial of Atlantis and the consequent fall of the loess.

It is easy to imagine that knowledge of these catastrophic events is what prompted the Babylonians to keep such careful records of the remaining piece—perhaps the largest and most awesomely impressive of all. Namely, they were terrified that even this third comet would strike the Earth—but as luck would have it, it struck Venus instead. According to those Babylonian records, their astronomers were following the wildly irregular motions of Venus. But we have only to understand that after the planet captured this object, the combined pair continued to bear the name of its most impressive component—that is, the name which had already been given to the comet.

The beard was, of course, a consequence of the survival of the comet. Evidently it faded so slowly that the change was scarcely noticeable during the course of one lifetime, so it simply never occurred to people down through the ages to make special note of it; it was a fixture and would always be there. Whenever reference was made to the beard it was usually in a religious context. For example, statues of the goddess Venus were sometimes shown with a beard, but without a very broad hint that would scarcely ever be interpreted as a property of the planet. It would be far more natural to conclude that the ancient people attributed hermaphroditic qualities to this deity

Although the beard is gone, I am of the opinion that some

residue of the phenomenon has persisted until very recent times and can even be observed on occasion today. I refer to the so-called "ashen light" of Venus. Flammarion (8) describes this as a mauvish glow sometimes seen inside the crescent. The name suggests that it derives from sunlight reflected into the night region of the planet from a satellite—in other words, moonglow, but of course Venus has no moon. Since the glow is only rarely visible and has no obvious explanation many authorities deny it altogether. Flammarion, for example, claims that it is seen only through refracting telescopes and stems from flaws in the objective lens. However Cruikshank (7), joins many others who have observed it and declares it to be genuine. From our point of view this ashen light would be interpreted most plausibly as the last faint gasp of the comet Venus captured some three thousand years ago.

One cannot fail to notice the great disparity in lifetimes between the comet which struck Venus and those which have struck the Earth. I can offer no explanation for this great difference beyond the obvious one of size alone. Perhaps those which struck the Earth were very small pieces of the original. Still another conceptual problem is posed by the perfectly normal motion of comets in gravitational fields. Of course, even a grain of sand will behave in the classical fashion, but it is not clear that a massless hole should behave in this same way—unless perhaps the gravitational attraction were itself somehow four-dimensional.

But let us set this question aside for the present as unanswerable and proceed to another topic, for we are in a position to offer compelling proof of another bizarre phenomenon, now all but forgotten. I call it the "Patience Worth Phenomenon" because to me it stands alone and is not to be considered in the same context with other happenings which might seem superficially similar. Blundly put, Patience Worth was a spook who communicated over a period of twenty years through an Ouija Board. Please hear me out; the circumstances, as I say, were unique.

The communications began in July of 1913 in St. Louis, Missouri. A Mrs. Pearl Curran and a friend were passing time at the board, when suddenly the planchette became forcefully alive. The communicant identified herself as Patience Worth, a young girl born in rural England some three hundred years previously. She had emigrated to the colonies only to be killed by an Indian's arrow shortly afterwards. She was fluent with the planchette and playful with onlookers, and so great was the interest that regular sessions were held in order that invited guests could enjoy the sport; a careful record was kept of all proceedings.

Quite different from other supposed spirit communicators before and after, Miss Worth did not attempt to explain the meaning and purpose of life to her audience. In fact, she artfully sidestepped all discussion of such matters and preferred to amuse herself by composing impromptu poems on sundry topics as suggested by those in attendance. However, it soon became apparent that she had a serious purpose as well. She desired to write a book.

Her story proved to be set in the Holy Land at the time of

Christ, and however many people might be in attendance seeking to be entertained with repartee, at least some time was spent at each session working on this book. Strangely enough, Patience chose to tell her story in an artificial dialect. It is a primitive and sometimes obscure form of English which consulting philologists agreed was never actually spoken anywhere in England at any time. Despite this primitive language she was able to convey heartrending imagery so vividly that one can easily imagine that she had firsthand knowledge of the places and events which she described—hence our interest, for in her story she made reference to the beard of Venus.

But I am getting ahead of myself. Miss Worth's fame spread far and wide, and among those attending the sessions on several occasions was Henry Holt, the book publisher from New York. He was greatly impressed, both with the proceedings and with the book as it was evolving so he agreed to publish it upon completion—which he did, in 1917. Its title was, "The Sorry Tale" (9), and it comprised some 300,000 words in all—a veritable tome.

Owing to its mode of composition one cannot be surprised that it became a subject of heated controversy. Walter Franklin Prince investigated the phenomenon in depth on behalf of the Boston Society for Psychical Research and reported his findings in Reference (10) which offers very interesting reading indeed.

Despite overwhelming evidence for the validity of this phenomenon many people have been quite unwilling to accept it at face value. These skeptics exhibit the typical savant's reluctance to acknowledge anything inaccessible to reason; they seek shelter in the limitless power of the human mind to remember and to synthesize.

That is, while admitting that she did not perpetrate deliberate fraud they argue that Mrs. Curran must have unconsciously woven apparently forgotten experiences into her tale and produced it in the manner of automatic writing. When they cannot find the raw materials in the "library" of her reading and other contacts they make recourse to a hypothetical "collective mind" which she supposedly tapped telepathically in order to produce this book.

But we are now in a position to rebut even these most fanciful criticisms definitively. I have already mentioned that Patience Worth referred to the beard of Venus in her story. The reference is on page 228 and reads as follows:

"And lo, the eve hung late, and late had crept unto the dimming of the earth, and behold, upon the east sky the eve's star gleamed. And the clouds arose at the west way, and Hatte looked unto the star's beard that streamed the sky."

Here it is necessary to grant that the author lacked understanding of the heavens because, of course, the evening star is to be seen only in the west. Nevertheless, the reference is clear; this was a star with a beard, known to her as the evening star. It was not merely a chance comet—which may show a beard, to be sure, but cannot be confused with a star.

Thus can we now set aside both subconscious recall and collective consciousness as agencies in the production of this work because in all likelihood no one on earth at that time—not

a solitary person, Mrs. Curran included—had any inkling whatever that Venus wore a beard in those days.

So that bizarre spectacle has played a very useful role indeed. In coming to understand it we have corroborate Donnelly's century-old perception that the ice ages were an illusion and traceable to the same catastrophic event which destroyed Atlantis—a comet striking the Earth. And to put icing on the cake it has proven the Patience Worth phenomenon genuine—a fact with important philosophical implications of its own.

By corroborating the bizarre nature of comets it has helped to define an important limit to the scope of human intellect. Heretofore we have recognized certain practical limits in our understanding which stemmed from the sheer complexity of nature, but the scope itself was widely deemed unlimited; all of nature lay within our purview. But it is now clear that we have very fundamental limitations. Owing to a dimension of reality inherently inaccessible to human perception there comes a point when even the most august of human wisdom turns to folly—which should put us on guard against unwarranted intellectual pretensions.

The Patience Worth phenomenon has troubling implications for we now know that even the inner workings of our own minds may not be our own after all. Unsuspected outside influences may be important factors in our lives, in our creative efforts and even in our very passions. Who can we ever trust now to explain the workings of the human mind?

As is often the case with new insights these realizations pose more questions than they answer, and some of these can never be answered. However we can go far toward a clearer understanding of nature merely by clearing away the fallacies that have been clouding our thinking these many years. And in the rethinking let us remember to stand less in awe of commercialized Science than heretofore.

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BAIGORRI

THE RAIN-WIZARD

Translated by Jorge Resines

Translation of the article "Baigorri: El Mago de la Lluvia" by Hernan Ceres, which appeared in issue #13-May 1968-of the Argentine magazine "Todo es Historia" (Everything is History). The notes in-between "[]" are the translator's.



Photo taken in the Argentine province of Chaco during the early 1930s, during an expedition searching for oil and water. Juan Baigorri, center, is flanked by two engineers apprenticed to him, names unknown.

We are at the end of 1938. A progressively "cloudier" sky thickens upon the world: in Spain a civil war has raged for two years producing extraordinary emotional repercussions in our country [Argentina]. In Europe the Munich Agreement seems not to have attained Continental balance. Hitler still continues threatening, harassing, and the UK, France and the USA behold with amazement the tremendous violence coming out from German forests.

An overcast sky. In Argentina President Ortiz rules, who arose from an election contested by all other political parties, who already evidences before people intimate to him an anxiety to end electoral fraud, endemic in Argentina.

The judicial process concerning the mafia of "Chicho Chico" [a local gangster], and the affair of Martha Stutz [a woman who disappeared one day and nobody was able to find her] "thicken" the national panorama. But if, metaphorically speaking, the sky is overcast upon the country and the world, there are zones of Argentine provinces where not a drop has fallen for two or three years, a merciless blue sky. It has not rained in the province of Santiago del Estero, for example, and the drought has razed arable lands and woods.

However, on Christmas Eve of 1938, upon the capital of Santiago del Estero and other assorted places in the province, an overwhelming rain reaching 60 millimeters [2.5 inches] fell in the city. An amount that had not been seen in the past 50 years... The "author" of that rain was named Juan Baigorri Velar [in Spanish countries, there exists the usage of placing the father's family name as the first one and the mother's second; as is the case here. You will see the rainmaker's name as "Juan Baigorri" in the rest of this article].

WHO WAS BAIGORRI?

When, during the second presidency of Yrigoyen [1928-1930, he was ousted by a military coup], General Enrique Mosconi invited Baigorri to Buenos Aires city to be in charge of the autonomous government agency of Yacimientos Petroliferos Fiscales [Fiscal Oil-Wells], of which Mosconi was then the head, he knew very well whom he was calling. The engineer born at Entre Rios province, city of Concepcion del Uruguay, was the son of a military home, ruled by order and discipline. His father, a colonel of the Argentine Army, was a great friend to General [Julio A.] Roca [twice president of Argentina]; but he [Juan Baigorri], after ending High School at the Buenos Aires National, chose science instead.

After graduating in Geophysics as Engineer at the University of Milan (Italy), he travelled widely through Europe, Africa, Asia and the USA, acting as an oil-technician paid by different companies. When he returned to our country, Baigorri discovered the "Meson de Hierro" ["Big Table of Iron", literally], a famous meteorite fallen over 200 years ago at the edge of the Austral Chaco and the Chaco of Santiago del Estero province. He found it using his devices, which were able to measure electrical potentials and ascertain electromagnetic ground conditions.

Afterwards he worked in Mexico, Bolivia, Paraguay, Uruguay, Chile, Brazil and Peru, in this latter country he received the offer from Mosconi, who wanted to create a Government agency capable of supervising drilling, extraction, refinement and further sale of oil, with [President] Yrigoyen himself agreeing to it ("at least, he did not open his mouth" Baigorri commented later, "during the long interview we had"). But the fight against the many vested interests of the time did not make him enthusiastic and he returned to his own job, this time in Buenos Aires province, travelling every now and then to Montevideo [Uruguay].

An event of that time reflects his character and shows his Basque ascendancy. His then-home of the Caballito district [Buenos Aires city] was not healthy enough for his wife and small son William. There was a lot of humidity on the walls, and the health of his family and that of his devices were both endangered. One Sunday morning, he went over a trainway of the "2"-line, which going along Rivadavia Avenue joins the May Square [where the House of Government is located] with Liniers [an important railroad station]; he carried both an altimeter and a notebook. When arriving Liniers he made a summary; the highest point of the city was located in-between Rivadavia Avenue 10100 to 10200. He returned via the same trainway and discovered a home for sale at the corner of Ramon L. Falcon St and Araujo St. This very home seems to be today [1968] populated by memories and within which seems still to resonate the murmur that a feverish crowd unleashed one afternoon, some 30 years ago when saluting the "New Jupiter"...

We are back again in 1938. Working at [the city of] Colonia, Uruguay, Baigorri verified that whenever using one of his devices to determine the composition of a subsoil, provided with chemicals and a single battery, the cleanest sky becomes a leaden-vault. And it rains when, generally, at this time of the year the Uruguayan soil does not receive too much rain.

He returned to Buenos Aires city to continue testing those

metals that broadcast the electromagnetic waves able to produce an atmospheric congestion, and from his attic at [the district of] Villa Luro, he made life difficult for the inhabitants of Buenos Aires city. Above all, for those who like soccer and races for, systematically, Baigorri "falls heavy" on Saturdays and Sundays. According to his own statements, many soccerless Sundays and many muddy racetracks were produced by his own experiments.

After confirming his experiments, he obtained an interview with the manager of the Ferrocarril Central Argentino [Argentine Central Railroad, a British owned system of railroads], a Mr MacRae, whom he asks for one of their wagons to carry out experiments in those zones reached by their tracks. He asked for the driest region, preferring the provinces of Buenos Aires, Santa Fe or Santiago del Estero... Anywhere, as long as it was the driest place.

Mr MacRae showed a well-concealed interest, and entrusted the mission of accompanying "that weirdo" to the Chief Agronomer for Rural Promotion of the railroad, Engineer Hugo Miatello Jr. He [Miatello] stated that the chosen place was the unwatered ploughfields in Santiago del Estero, because it was most in need of rain.

THE FIRST EXPERIMENTS

In October of that year [1938] the first tests were made. Miatello and Baigorri travel to Pinto station at Santiago del Estero. And from there the Agronomer informed the railroad's manager that:

"We arrived with completely normal weather, a day of strong sun and North wind; at once we proceeded to install the apparatus "and two antennas at the [agricultural] colony of Los Milagros, [The Miracles] a property of Mr Juan Balbi, and only a few minutes after we began we could notice the characteristic warm and dry North wind change into an East wind, being this almost cool; by about 12:30 [i.e. 30 minutes after midnight] in the night, that is 8.5 hours after the device was activated, there was a light storm of strong wind accompanied by a light short rain."

Engineer Miatello [Agronomers are also called Agronomical Engineers] continued his report, dated November 25th., 1938, stating that in the next five days an East wind blew constantly and despite verifying the formation of storms there was no rain due to the low power of the device, according to statements made by Baigorri:

"On the last day of experimentation the device was disconnected and the wind stopped blowing [the East wind, apparently; in the original this is not clear. During the afternoon again blew the North wind and by the night it stopped; the device was again connected and at once, after only a few minutes, the East wind blew again."

On the return trip, both travellers had met National Senator Dr Castro and the owner of a lumber firm Francisco Pes, both coming from the province's North-East, over 300 kilometers from Pinto station. They both commented with great amazement, specially the latter, the change of the wind from North to East, a phenomenon that had not happened before, and from this it could be made out that Baigorri's device had influence in a radius of many kilometers. The report by Miatello concluded:

"Now Baigorri will build a more powerful apparatus and in December we shall return to Pinto to carry on experimentation. Once

they are over and their success verified, it won't escape the lofty understanding of the Railroad's Manager, how transcendent and useful is Engineer Baigorri's invention who, apart from being a good Geophysicist, is a remarkable dowser of the scientific kind who ascertains underground water currents with true accuracy, indicating depth, quality of the waters and the usable amount."

Dr Pio Montenegro, governor to Santiago del Estero province, took Baigorri to a field with him, located at the North of the capital city, which was abandoned due to lack of water. The visitor made a [dowsing] study and ascertained an underwater tap-water current some 120 meters deep with an output of 4,000 liters/hourly. Making a drilling with a machine from the Ministry of Agriculture, the calculations were verified. Also, being at Selva, heading an oil-drilling [Baigorri] ascertained an abundant underground tap-water current which crossed under the train tracks of the Ferrocarril Central Argentino — nowadays the Ferrocarril Mitre — close to Ceres station. This finding was later turned over to the Railroad's ownership.

Nothing else was needed. Baigorri was authorized to travel to Santiago del Estero and to experiment at the provincial farm given by Dr Montenegro for testing. In December 22nd, 1938, he arrived at the province's capital city and without wasting time he went to work. Two young engineers, professors to the local National school, added in their greeting:

"Do not give us rain on Christmas Eve, Engineer. Look, we have everything ready for the party. It has been 3 years since the last drop has fallen, and if you get on the loose with heavy rain you will ruin it..."

Baigorri paid no attention to such ironies and began to "manufacture" his artificial rain. Owners of racing horses went to see him, asking him not to make it rain on Sunday for their "thoroughbreds" had to race. But the "foreigner" had "deaf ears" and connected his devices. After 55 hours of work Santiago del Estero city received the blessing of 55 millimeters of rain [2.2 inches]... Governor Montenegro's sleep was interrupted and he quickly left his home; and at 3 AM the Christmas dances, to which some had paid "up to 8 pesos for a ticket", had to be suspended. It had never rained so much for 50 years. A provincial Representative who had stated the drought would last 3 more years, at the moment of getting acquainted, had the lofty attitude of congratulating Baigorri the day after his experiment; but not so the young engineers who "were never seen again".

After the travellers completed 122 hours of residence at the province, the rains' record was released, to wit:

Capital city	60	millimeters	Fernandez sta.	70	mm
La Banda city	60	"	Loreto city	45	"
Robles city	10	"	Silipica city	10	"
Villa Simbolar ...	44	"	Los Naranjos	44	"
Guasayan	10	"	Vinara	15	"
Tapao	24	"	San Pedro	10	"
Choya	26	"	Herrera	9	"
Lugones	13	"	Taboada	14	"
Forres	14	"	Beltran	18	"
Vilmar	20	"	Selva	11	"
San Ramon	53	"			

Baigorri returned to Buenos Aires city after Christmas. The

train bringing him back from Santiago del Estero, made a brief stop at Belgrano station [Buenos Aires city] and there his brother loaded the devices into his Dodge. Miatello gave the following description of said device:

"It is no bigger in size than a Radiotelephony box, and it is crowned by two antennas similar to those of said usage, it achieves amazing results."

When arriving at Retiro station a crowd lifted them both on their shoulders — many did not even know the travellers — and they were both deposited safe in the midst of Retiro Square by the side of the "Britishers' Tower" [a clock similar to the London "Big Ben"]. Afterwards a compact convoy of cars accompanied them to May 25th St and Cangallo St, where the Railroad's offices were. There, Baigorri was told of some statements made by Engineer Alfredo G. Galmarini, head of the Weather Forecast of Argentina, about the events at Santiago del Estero. [Newspaper] "Critica" [Critique] in its edition of the previous day published a small news item in which Galmarini not only denied the facts but also poked fun on them calling the whole affair "a parody". In his statements he said:

"Knowing the terms, extensions and projections that have been attributed to the pseudo-experiments of Santiago del Estero made by a private firm, and because of the charge I am at, I am obliged to state that said informations are not only a mockery to science but also to the most elemental common sense. Because of it, the Agency at my charge is not interested in debunking, using scientific-technical conceptions, the character and possibilities of said experiments. I think that public opinion all by itself is what must debunk such a 'tropical imagination' to the point I consider the communiques on the event should have appeared in December 28th [Argentina's 'April Fools day'] for the well-known reasons."

Galmarini stated the Weather Forecast had already predicted the rain at Santiago del Estero, to which Baigorri showed newspaper clippings from the "El Liberal" newspaper indicating the Forecast had indicated for the day of the experiments: "Santiago del Estero, Chaco and Formosa: Good and hot, with little change in temperature". Anyway, the head of Weather Forecast insisted on his attack and ridiculed the whole event, he was published in the papers stating:

"According to the 'Medicine' publicized, we shall no longer have any more deserts and I understand that this system's defenders, if they were sincere, have fallen short in their projections for if with just a single box rain has been achieved over a very extensive zone of our country and also provoked the characteristic meteorological perturbation, registered by the Weather Forecast at 9 PM of Dec. 24th and released to the public in the synoptic chart, perturbations over 1500 kilometers long and which being born at Tierra del Fuego [province] ends at the center of Cordoba [province], passing over Mar del Plata city [Buenos Aires province] we should conclude that increasing the device's power and multiplying its copies, we could achieve without any great effort the Flood."

The British, however, were concerned with the phenomenon. From "The [London] Times" they asked for an interview through Engineer Miatello. Baigorri agreed to it, later refusing access to an American engineer who offered him many dollars for his "rain-making machine". Baigorri answered:

"I am Argentinian, and as such I want my invention to benefit

my country. I am not willing to sell away the formula for all the money in the world."

The city [of Buenos Aires] responded to the gesture from its neighbor and a large crowd shouted with joy before the home at Araujo St. He received many names: "Villa Luro's wizard", "Sky Revolutionary", "Modern Jupiter", and so on. Only Galmarini continued with his debunking campaign. But this was contested by Baigorri himself. This time, [newspapers] "Critica" and "Noticias Graficas" published his signed challenge:

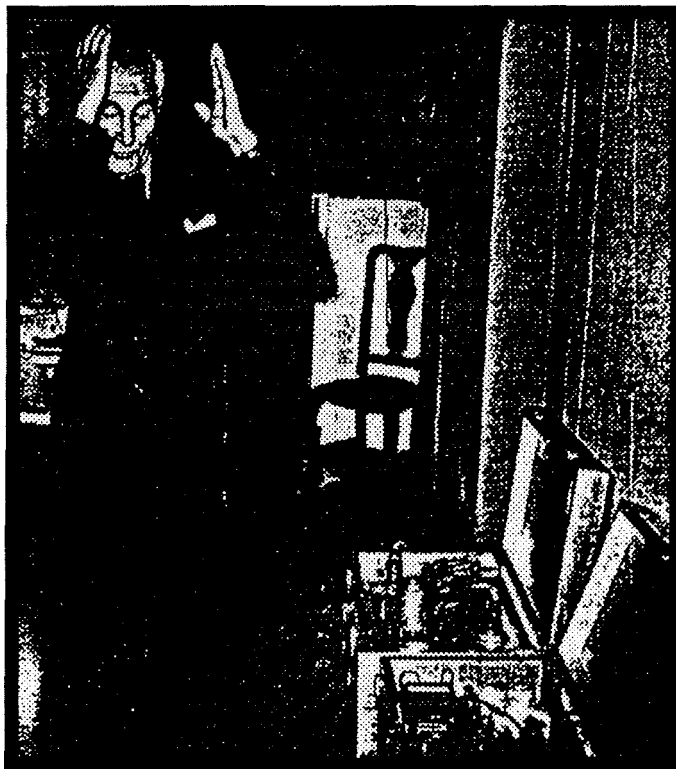
"As an answer to the critiques against my procedure, I will give as a gift rain to the city of Buenos Aires on January 3rd, 1939."

Somebody said that in the beginning the date fixed by Baigorri was December 31st but that later, persuaded by those who did not want a "wet" end-of-year, decided to move the experiment to the first days of the new year.

The country [Argentina] was shaken. Comments and conversations were made at cafe tables, churches, and shopping places. A kind of collective psychosis wrapped everybody and everybody was concerned only with Baigorri. The sentence by Judge Luis de Elizalde, acquitting all defendants for the murder of Ali Ben Sharpe (aka) "Chicho Chico", was brushed aside; it was considered worthless that after a month of police inquiries the kidnap and disappearance of Martha Stutz had not been resolved; Spain's war or Hitler's threat were of no interest... Baigorri was news!; and up to him reached all the reporters of the time, in interviews covering whole pages. The challenger explained that wet regions are naturally better suited for his experiences:

"When I began my experiments at Buenos Aires [city] I produced rain as many times as I wished. The rains of July [1938] were mine. Yet it means nothing to produce rain in a wet region; we had to look for a dry zone where rain is a present that never comes. This is why I asked for help to an important firm, such as the Railroad, for I wanted to be allowed to travel there and at the same time a responsible technician had to be appointed to control my experiments."

On the very page of "Critica" (Dec. 30th., 1938) in which "El Trust Joyero Relojero" [an important jewelry-firm of Argentina] offered a couple of 18k gold wedding rings and a single 18 k gold ring with platinum and small diamonds, plus a practical tray for cakes for only 45 pesos, a 4-column headline stated "Baigorri began today to prepare the rain that will fall from 2nd to 3rd [January]". And some lines below, it added that when the device began working at 10 AM the wind had changed direction. That afternoon of Dec. 30th [1938], Baigorri visited the Minister of



Juan Baigorri at home in Argentina in 1969. The two large trunks comprise his rain-making instrument.

Agriculture, Engineer Jose Padilla, accompanied by Engineer Miatello and by Mr Cesar Fioretti. Padilla received from the visitor the official version of his experiments to provoke rain at the appointed date, and wished him success. After the interview, Baigorri went by an umbrella shop in the downtown and made one of the few jokes known to him. He bought an umbrella and sent it as a gift to... the Weather Forecast's Director!

End-of-year celebrations passed without great news. President Ortiz read his message by radio from his residence and the Argentine people, as did the world, prayed for peace; a peace that months later was destroyed by the thundering of cannons. The dawn of January 1st found the city resting. The "dozing" morning of Buenos Aires city lasted until noon, for by that time the sky

began to be covered by clouds; it was very hot.

"It's Baigorri, who has plugged the machine" said those in favor of success for the rain-wizard. Everybody closely followed the unfolding of events. And, on its side, Weather Forecast stated that:

"a mass of warm air covers most of the country. The air is relatively humid at the Litoral [i.e., the Argentine Mesopotamia] and unstable, a reason why there occurs an interaction of the air-layers that brings cloudiness, short heavy rains ['chaparron' in the original Spanish] and electrical storms. The zone with short heavy rains is..." and it was indicated "just in case" [Hernan Ceres does not reproduce the forecast in full, I only translated up to what was written]. By the night of January 1st, all of Buenos Aires was anxiously looking at the sky's status, covered by clouds. The family talks in the different city districts had more people gathering as many refused to sleep early. The old bakeries worked overtime... until early in the morning of January 2nd, when hope was joined with prayer, an unending rain began to fall upon the large city. After 5 AM, it began raining heavily. This rain was accompanied by a hurricane-like wind that in some instances behaved as such.

Engineer Juan Baigorri Velar was on the front page of the most "sensationalist" newspapers. "Critica" needed a title for its 5th edition [about 2 to 3 PM] and got it: "AS BAIGORRI FORECAST, TODAY IT RAINED". And, again, a crowd gathered before the home of Villa Luro district. Again, the chorus cheering the "rainmaker". Again petitions of rain from the Argentine provinces... and the offers from the USA... and his firm refusal:

"It is not for sale, it is for my country. This is because I am a creole, that's why this 'creole wave' must not leave Argentina..." this he said to anyone asking about the future of his invention. And Buenos Aires celebrated the device. And the storm in the British Channel, the one shaking the "Canterbury" ship in which Prime Minister Chamberlain was travelling, was attributed to Baigorri by his most ardent followers...

A month later, he was invited to travel to Carhue [Buenos Aires province] for the lake of the zone was dry. He did so alone and arrived surrounded by a halo of people at the local City Hall: "You cannot produce rain", he was told by the Secretary of the local municipality in the midst of the talk. "I came here not to fill in my pockets but because you called me" was the only answer. And closing the door of his workroom, he decides to setup and activate his device.

On February 7th and 8th [1939] Carhue had two heavy rains that flooded the confines of the lake and as a punishment to the Municipality's Secretary's doubt, the electrical storm accompanying the rains fused the clock of the square that had just been inaugurated. [In all countries colonized by Spain, when—in the past—a city was officially founded it was around a central square at which sides were located: the church, the municipality, the police or army building and either a bank or the home of an important local character. Around it were constructed homes for the important folks and surrounding them, those for the common folk. Outside it all a protective wall — first with logs and later with either stone or cemented bricks was built. In this manner "the most important part of the population" would be protected from inimical attacks.] In the presence of a Public Notary, on February 13th, 1939, a writ was made certifying that rain had fallen then at the zone.

Returning to the Soil

After living through the praise brought by "his" last rains, Baigorri, forgetting the critiques from Galmarini, fell silent. For three years in a row there were no experiments and rains were normal. In 1945, asked by his friend Alfredo Cernadas, owner of the ranch "La Delia", he decided to go oil-prospecting in Buenos Aires province to find suitable wells. The zones of Mar del Plata, Balcarce, Tandil, Loberia, and the whole South of Buenos Aires were investigated by his apparatus. 112 investigated places were the total, which to be exploited needed authorization from the provincial government, according to the Mining Code.

But, again, destiny stepped before Baigorri. The death of President Ortiz made it possible for former Vice-president Castillo to take office and he was ousted by a military coup unleashed on the morning of June 4th, 1943. Provisional authorities got in charge of all provincial and national posts. Baigorri wanted to know the final destination of all dossiers logged before the provincial government. All papers were introduced in correct order and all taxes regularly paid. Yet, it was not known what the respective Ministry had done...

Accompanied by Cernadas, his lawyer Dr Eduardo Rivarola and the Jesuit Father Francisco Galarza, Baigorri appeared before the new Minister of Public Works. The group was first received by a Secretary who claimed "not to know anything" about the dossiers. At last they saw the Minister, who explained that he

needed time to find the dossiers. Suddenly, Baigorri looked over and said: "There they are", indicating a heap of folders "sleeping" in a corner, "I know the color of the folders' cover". He took one, opening it. He showed the dossier to the official, who promised to take care of the case folder by folder over the next days. 48 hours later, all newspapers reported at Buenos Aires city that the zone explored by Baigorri has been decreed as a "fiscal zone of reserve" by the government.

The siege narrowed around Baigorri, to the stubborn persecution by the Weather Forecast, another is added against his scientific labors. The former "wizard of the heavens" went ahead doing works for others for years, at different points of Argentina, without attempting to obtain approval from official agencies.

The Rains Return

By the end of 1951, Baigorri returned to the limelight. Peron ruled Argentina and Engineer Raul Mende was in charge at the Ministry of Technical Affairs. Baigorri was appointed technical consultant to the Minister, with the expressed indication of allotting him a wage. Baigorri interpreted that this would mean the free-giveaway of his devices and ideas to the government and preferred to work without a wage. In January 1951 he was sent to Caucete, San Juan province, where rain had not fallen for the last 8 years. There he unleashed three rains, the last of 31 millimeters. He remembered years later:

"I had to work with great care. My devices are constituted by two circuits: 'A' circuit provokes tornadoes and cyclones; 'B' unleashes intermittent rains. When we got down from the train at Caucete, we were greatly amazed. The church and the Derby Hotel were with supports. The city still showed the sad remainders of the 1944 earthquake. I worked with circuit 'B', but most important in that season is that, for the first time, the Zonda [wind] did not blow."

That very year he was sent twice to Cordoba province, to end a drought striking several zones of the province. On November 21st [1951] he unleashed a rain of 81 millimeters, that brought as a consequence a tornado of regrettable consequences. Next month he unleashed two rains — Dec. 18th and 28th — the latter of 51 millimeters, leaving the San Roque Dam [close to Cordoba city] with over 35 meters of water in the basin.

Always backed by the Secretary of Aeronautics [Argentine nickname for the Air Force], in which the controller Enrique Carpena was overseen by Vice Commodore Rodriguez-Leopardi in January of the next year [1952], Baigorri traveled to La Pampa province, also under the punishment of a severe drought. Results were very good, for he unleashed rain that totalled 2160 millimeters within the whole province.

On returning to Buenos Aires city, he waited for a time without receiving any news and he then decided in November 6th, 1952 to write a letter to Minister Mende. In said note, after reviewing the experiences of San Juan, La Pampa and Cordoba provinces, he added this paragraph:

"I want also to remind Mr Minister that up to this day I have not been paid any salary for all scientific works done for the sake of that Ministry, to eliminate drought in Argentina. After all that has been informed, I would be grateful to Mr Minister if he were to inform me if my discovery on artificial rain is or is not to the government's interest..."

An official answer was not long in coming. Both short and negative, because Baigorri was asked to disclose all about his discovery, an invention considered impossible by the average scientist. Undersecretary of Technical Affairs Mr Tomas Vottero signed the note, in which text it was stated:

"In order to respond to what you require, and for the sake of considering [the possibility of buying] your invention, it is imperative that you send us a detailed report on the technical-scientific bases of said device."

His Last Appearances

For over a decade, little was heard from Baigorri, as if he had called himself to silence, he rejected any occasion of self-propaganda. He went along his life of retirement, reading a lot and travelling very little. In 1965, the commercial attache of Uruguay before the Argentine government, Mr Guillermo Stewart Vargascame came to his home of Villa Luro district. His country was going through a long drought and Baigorri was known there. To fulfill an official petition, Stewart Vargas went to the Argentine Weather Forecast, where he was informed about the inaccurate news respecting the exploits attributed to the inventor. When the Uruguayan attache told this to Baigorri, his answer was pretty simple: "All right, from tomorrow onwards watch the clouds". And for some time the sky above our [Buenos Aires] city became frequently overcast.

In November 1967, Chile also had a drought that devastated the arable lands and decimated its reduced cattle-stock. In a note sent to him that month, the Chilean Ministry of Foreign Affairs requested his services with his "physical apparatus to end the drought". Also, the note added that it was well-understood that "he was not to go to Chile in order to make experiments, but to definitely end the drought". The silence from Business Attache Mr Alvarez-Droguett [when questioned on the subject] was an eloquent answer.

Invention or Coincidence?

We are now in 1968. Thirty years have elapsed since the first news with which Baigorri impressed a more gullible and less-technological world. Today the tale about "his rain" sounds much like much the plot of a cowboy movie [in Argentina, this expressions refers to the highly-improbable exploits of American series], as man was close to landing on the Moon. But before the advance of electronics, the almost regular launching of artificial satellites, before all of this scientific revolution, the mystery of "Baigorri's rain" has not been solved.

"Of course it rained, and how!" answer old people at Santiago del Estero, when referring to that year of 1938. "He said a date and on that date it rained over Buenos Aires" the people who lived that time assure us, commenting on the rain of Jan. 2nd, 1939.

What happened then? Was it a coincidence? Was the scientific explanation given by Baigorri himself at the time and which he still maintains not good enough?: A device comprising a special antenna, broadcasting electromagnetic waves to the atmosphere and which goes on provoking an overcast sky until rain is unleashed. Why did the Weather Forecast so stubbornly attack his experiments, while all of them were verified by responsible professionals? Were the "vested interests" so often

mentioned by the inventor a reality or, on the contrary, a mere coincidence that did not allow the inventor developing his ideas?.

Foreign to these dilemmas, Juan Baigorri lives silently at his home of Villa Luro, accompanied by his faithful "Teofila" — female fox terrier nicknamed by his grandchildren — who looks with attention when he unfolds his memories and old newspaper-sheets. The past 30 years only encouraged him to cling stronger to his secret, avoiding any publicity. He prefers to be alone and, in that silence, to half-close his eyes and hear from outside the children's chorus that used to sing 30 years ago: "...may it rain, may it rain, Baigorri is in his cave... he plugs-in the machine and it rains at every time...". [END].

Translator's Note: Mr Juan Baigorri appeared once, in 1969, on Argentine TV in an "omnibus" program, one Saturday on Channel 13, where he reviewed his achievements but disclosed not his secret. His death occurred in 1971. His son, William, lives today and is a retired Argentine Army officer; but he makes no statements of any kind.

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Translation of the article "El Argentino que Hacia Llover" by A.G., from issue #6 of the Argentine magazine "Conocer y Saber [To Know and to Get Wise], April 1989.

THE ARGENTINIAN WHO MADE IT RAIN

by A.G.

On Christmas Eve in the year 1938 a very strange event happened in the city of Santiago del Estero and its surroundings. A short time before midnight there began to fall the first drops after a warm day with fully-blue sky. A short time later, rain fell like in the Flood. For one hour it rained like that without thunder or lightning. It was a calm rain, as if somebody were using buckets "up there". The rain gauge marked 60 millimeters, an exceptional mark for the zone. The man responsible for the phenomenon was Engineer Juan Baigorri; his name would soon be front page for all Argentines, who were divided into two parties: (1) Those stating Baigorri was a genius able to make rain and (2) The ones saying he was just a charlatan.

Born in Concepcion del Uruguay, province of Entre Rios, Argentina, Baigorri belonged to a family of prestigious military men. His father was a friend to General Roca and was a Colonel in retirement. Juan studied at the Buenos Aires National (College) and became a graduate engineer at the University of Milan, Italy, where he received a Gold Medal as the first of his class. He specialized in oil and as a first-rate technician he worked in the Middle East and the USA. He was called by General Mosconi to be part of the specialists' staff who founded YPF [Argentina's state managed oil-company, today — 1993 — in the process of being turned to private ownership].

In Argentina he became famous when finding—with a device of his invention—an aerolite called "Meson de Hierro", which had fallen 200 years ago at the limit between the Austral Chaco and the Chaco of Santiago del Estero. This device by Baigorri worked with a battery and some chemical reactives, and it also worked 'measure ground's electromagnetic conditions. Baigorri had noticed that whenever he connected his machine to find oil, the sky

became overcast. And if the apparatus kept on working, it rained always.

Newspaper "Critica" — the most popular among the afternoon papers — stood by the side of Baigorri against his debunkers, whose head was Engineer Alfredo Galmarini, head of the Argentine National Weather Forecast. Before the critiques from government officials, Baigorri answered with a gesture that "Critica" published on the front-page: He bought an umbrella and sent it as a gift to Galmarini together with a note indicating he would do well in opening it on January 3rd, 1939, for that day—at noon—he was to make it rain over Buenos Aires city.

After the challenge was launched, the city's inhabitants spent that day looking at the sky. And many left home with an umbrella, even if the journey had began with full sunlight. By 11 AM, Baigorri connected his machine and a short time later, dark clouds appeared. At 12 o'clock, a feverish crowd assembled before the home of the "Wizard of Villa Luro" to celebrate the heavy rain falling at that moment. The Weather Forecast had predicted for that day "good and warm weather, with little change in temperature".

But the most famous of all of his experiments was the one he made at Carhue. It was such a long time since it last rained there that the Epecuen Lake [famous for its medicinal waters] was completely dry. Baigorri arrived there with his two large trunks in the beginning of February. And on Feb. 13th, everything certified by a Public Notary, there fell such an intense rain all over the place

that the lake overflowed and many neighbors had to be evacuated from their homes. The rain was accompanied by a strong electrical storm and a lightning discharge fused the Municipal Tower's clock that had been inaugurated a short time previously.

Newspapers record his exploits for the years 1940, 1941 and 1945; with 112 rains in this year. Afterwards, a long silence. In 1951, Engineer Raul Mende, in charge of the Ministry of Technical Affairs in the first government of [General] Juan Peron, called him and asked him to travel up to Caucete, province of San Juan, where it had not rained for 8 years. There he worked with "Circuit B" to his machine, producing intermittent rains; "Circuit A" generated tornadoes and typhoons. The last rain totalled 31 millimeters.

In 1968 is verified one of Baigorri's final public appearances. The Republic of Chile, going through a long drought, asked for his services. He went there and it rained. Coincidence? Intuition to guess the imminence of rain? The truth is that nobody could explain the phenomenon of Baigorri's rains. From him only remains his modesty and the echo of a very popular song that said: "May it rain, may it rain... Baigorri is in his cave. May he plug in his machine for it to rain a long time..."

ENDNOTE: Both articles translated were a courtesy from Mr Eduardo Fernandez President of the Argentine Association of Inventors. Even if I did not like too much how the second article is written, I have included it for the sake of completeness.

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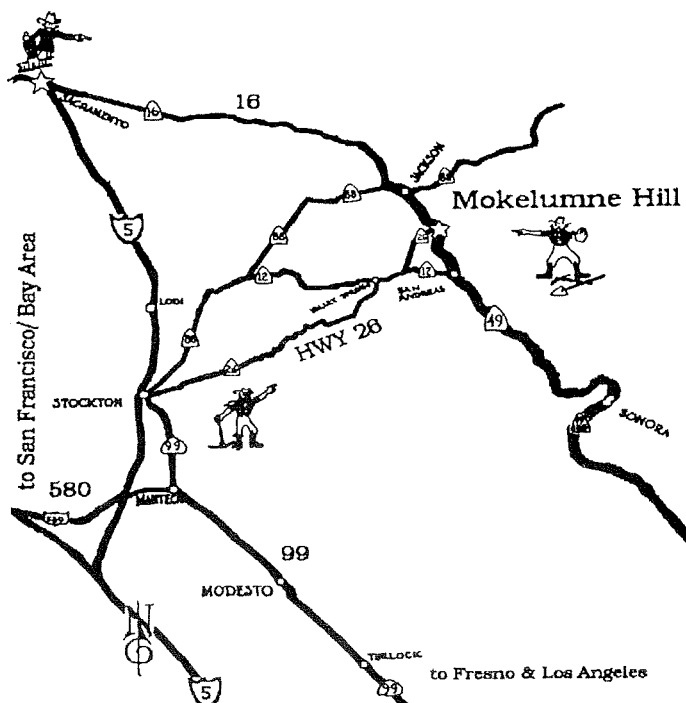
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In all the martial arts, there is probably no more impressive feat than the Iron Palm. When properly trained, this technique gives one the ability to break a board or a brick by simply slapping it from a short distance. This is not a hard strike with a lot of psyching up before hand. As a matter of fact, even a coconut (the toughest break) can be done by simply resting the elbow on the same surface as the coconut and dropping the palm on it.

(WARNING: Do NOT attempt any breaks mentioned in this article unless properly trained. Serious injury may result.)

Why a coconut? The 'coconut' is comparable to the human skull. This means that in a fight you have the ability to end it in 1-4 strikes. If you CANNOT end a fight in 1-4 moves you had better run. This is due to the fact that your attacker may have a weapon or have friends nearby.

The one punch strike comes from the godfather of all the martial arts, Five Elder Monk Mew Hing's Sup Bat Mo Jung Pai 18 Daoist Palms Gung Fu. Today it lives on in the hidden art of Bak Fu Pai (White Tiger System) Gung Fu. The heart of Bak Fu Pai is the closely guarded secret of the internal iron palm.

There are two types of training for the Iron Palm, external and internal. The external is the one most are familiar with as it involves the toughening of the hand by soaking it in salt water and repeatedly striking it against various surfaces. One school used to teach that you should break your knuckles until they fused together and became one super knuckle. The only drawback was that this training was for warriors who weren't expected to live very long. Those in modern times who did this ended up with hands that were crippled with ar-

thritis and useless.

The internal involves the use of various meditations (meds) to flow chi into the hands while keeping them soft and supple. Not only will this increase your punching power, but greatly increase your grip strength.

These meds will take only 5-10 minutes a day. Contrary to popular belief, the warrior class in ancient China did not spend hours a day in meditation. Life then was brutal and most had to work from dawn to dusk, just to survive. The warriors earned their living by guarding caravans and due to the hostile nature of the territory they sometimes had to cross, they did not have hours and hours to train.

Also back then, there was no gunpowder so the only way to beat a man was to attack him with several men or several men with weapons. Thus, a system was needed that would end a fight quickly so the warrior could immediately turn his attention to the next attacker. Iron Palm evolved out of this.

In Iron Palm, the warrior would root with his feet and fight with his hands. Forget the back flips and cartwheels, those are only for the movies. If any of you readers think you can survive a street attack by fighting like Catwoman, you're in for a rude awakening.

In Iron Palm training, there are four levels of breaks:

Level I—Iron Palm break of a coconut on the ground.

Level II—Iron Palm break of a coconut while holding it in the palm or suspended in a towel or by a string.

Level III—Iron Palm break of a coco-

nut while the coconut is on tofu or floating in water without either damaging the tofu or making the water splash.

Level IV is the toughest and it is

the ability to generate enough chi in the hands to break a coconut by striking at it, but not actually touching it.

I have been trained in and personally witnessed Levels I-III.

The med I am going to reveal for this article goes with the Level II internal iron palm coconut break. It represents only a small portion of the total training but will develop powerful chi in your hands which will increase your grip, strength and punching ability.

ANOTHER WARNING: Do NOT attempt to break a coconut, this meditation is only a small part of the total training which also includes such things as internal herbs, other meds, a special jow and much more.

Sit cross legged on the floor. You may use a pillow or the floor. If this is uncomfortable, you may sit normally in a chair. Rest your hands on your knees, palms up with the thumb and index finger touching on both hands. With eyes closed and tongue on the roof of the mouth, take one deep relaxing breath and let it all out. Take another deep breath and let 50% out and from that point, inhale and let it all out. Just relax and you will begin to feel a warmth or tingling in both hands as this is chi. Remain like this for 5-10 minutes. When ready to end, take three deep breaths and open your eyes.

This is best done once or twice a day. It also helps to put a few drops of Dit Da Jow (Chinese herbal ointment mentioned in previous article) on the hands before starting.

Also especially effective if done before a grip strength workout.

Dr. Knowlton is a 1993 inductee into the World Martial Arts Hall of Fame and the World Sports Medicine Hall of Fame. If you have any questions, you may write him at 5555 E 71st St #6100, Tulsa, Oklahoma, U.S.A. 74136.

Lakhovsky's Multiple Wave Oscillator:

THE FINAL APPROACH

by Peter A. Lindemann

SINCE MY LAST ARTICLE on the Multiple Wave Oscillator, which appeared in the 1st Quarter 1993 issue of **Borderlands**, a great deal has happened. My associates and I are confident that we have finally cracked the secret of Lakhovsky's miraculous MWO. For much of this breakthrough, I am deeply indebted to Hessel Hoornveld of the Netherlands. First of all, Hessel has run quite a few experiments and tested many different variations. Besides that, he visited Serge Lakhovsky in Paris, France in the early summer. His eyewitness account of a true Lakhovsky MWO in operation has solved most of the remaining puzzles. So much is now known that I, at least, consider the mysteries either solved or within reach. This article will lay out clearly what we now know and what we believe will fill in the gaps.

Hessel reported to me the following details of his eyewitness account. First, as Tom Brown and I have claimed for years, there is NO arcing between the rings of the antenna. Second, the unit DOES operate in the high voltage mode, with a two inch corona coming off the outer ring during operation. Third, the dark tubes holding the antennas to the stands each contain a high voltage step-up coil, so that both antennas are powered with high voltage independently. The wires that connect the antennas to the power supply are low voltage wiring. Four, Hessel was not allowed to see how many spark-gaps there are. However, both Hessel and I have run experiments with spark-gaps and we both believe that a number of small gaps in series work better than a single large gap. Five, there is a ground connection to the antennas. Six, the final detail that Hessel reported to me is very interesting and to my knowledge has never been mentioned by anyone before. It is that the various rings of the antenna are made from different metals. They are not all copper. I'll have more to say about this later in the article.

Fig. 1 is the very simple schematic from Lakhovsky's 1934 patent. During his visit to Paris, Hessel was not allowed to see inside the unit, so we still do not have an absolutely authoritative schematic diagram of an original MWO. But based on everything

that we do know, Fig. 2 is the most probable schematic. This is what I now believe to be the basic wiring diagram for Georges Lakhovsky's clinical MWO. It is close enough to what he was doing to be considered the real thing. I base this on what Hessel has told me and on the photo of Lakhovsky's clinical unit reproduced here as Fig. 3. Please notice that there are three wires on the ground going from the case on the right to the antenna on the left. I now believe that two of these wires carried the low voltage supply to the primary coil of the output and the third wire was the ground connection as illustrated in Fig. 2.

Lakhovsky's extensive work with the RCO and the MWO was motivated by his interest in overcoming the debilitating effects of living in and near noxious earth energies. Consistent with this, Jorge Resines tells me Lakhovsky wrote that the MWO would give the

best results when operated over sandy soils. These are the so-called "negative polarity" soils that can cleanly absorb the incoming cosmic radiations without reflecting back any disruptive interference. Now I can understand why these devices were never mass produced. All the rumors we have heard, that each unit was "fine tuned" to the specific location in which it was to operate, now make perfect sense. As Fig. 2 suggests, the multiple oscillations appearing at the antennas were not merely electric in nature, but were in fact earth energy drawn up from the ground connection. The effectiveness of the whole unit depended upon the local earth energy being in a benign state. If the ground upon which the unit was operating was disturbed, then these distur-

bances would also be drawn up into the system and projected by the antennas along with all the other oscillations.

The question is, can a generic design unit be as effective as the extremely refined units hand built by Georges Lakhovsky? From a purist's point of view, the answer is no. But in many situations the generic Beck-style units have been acclaimed as effective. The anecdotal claims associated with the various units that have been on the market over the last few years suggest this possibility. We feel that the closer one gets to Lakhovsky's actual work, the better the

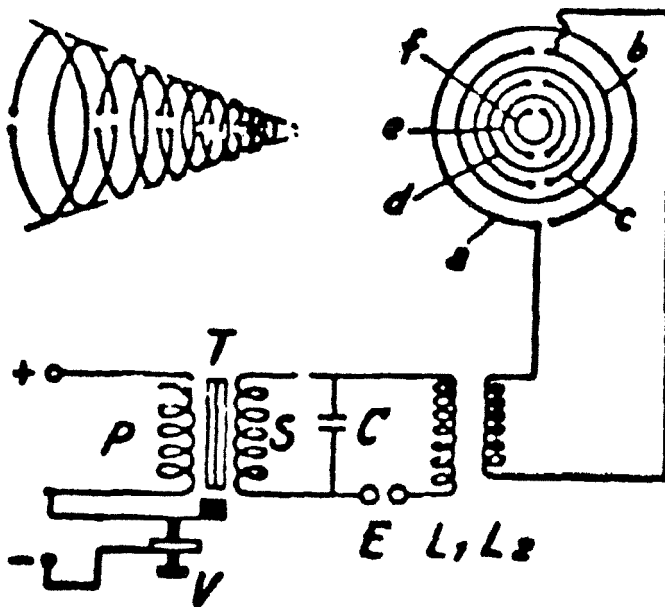
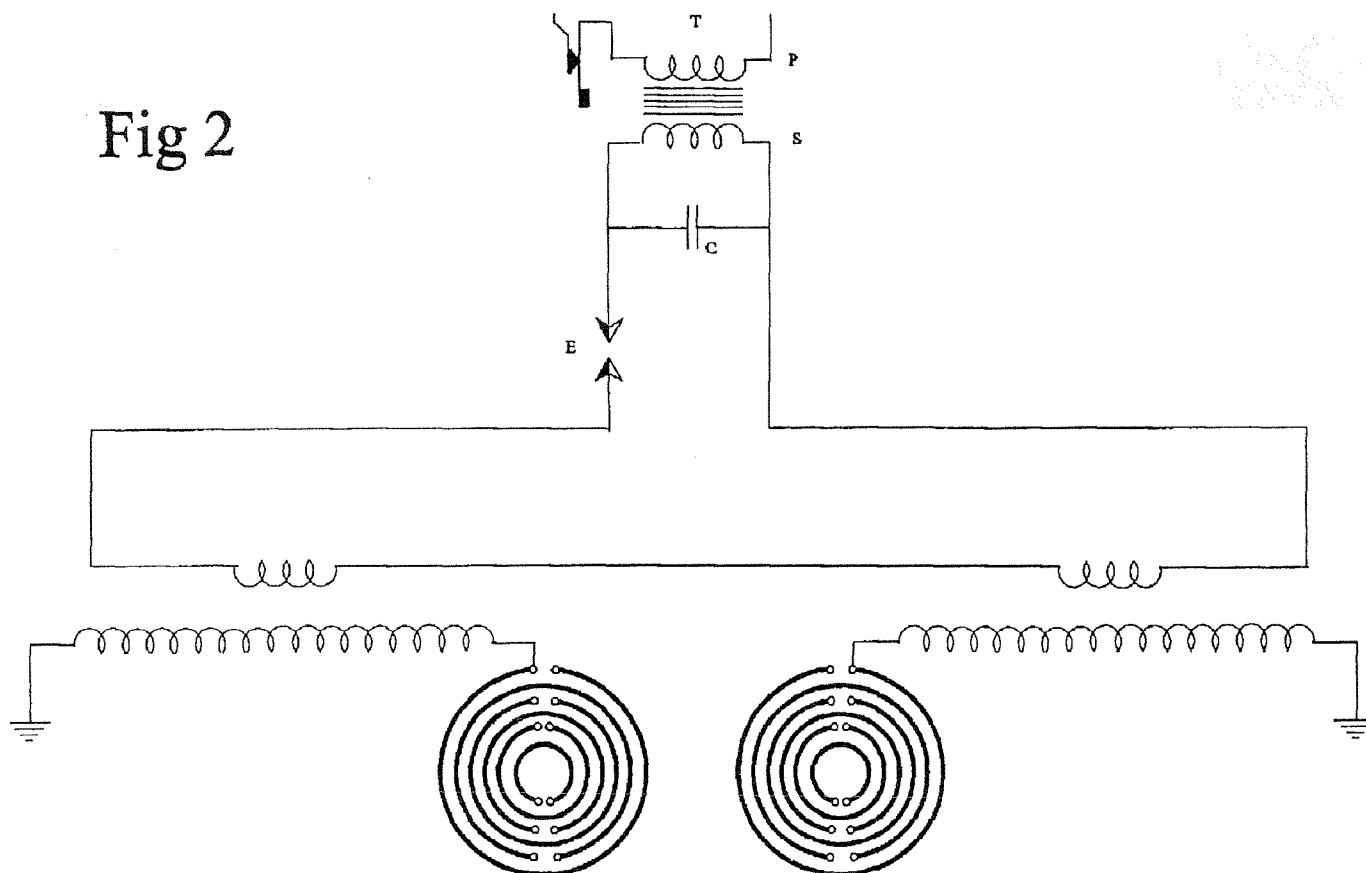


Figure 1

Fig 2



units will perform. Because of this, we are publishing this schematic diagram (Fig. 4) and parts list so that home builders can now make their own superior Lakhovsky-style units. We are also making these units available in limited quantities for serious amateur experimenters.

The current unit consists of four sections: (1) the power supply, (2) the capacitor charging system, (3) the spark-gap discharge section, and (4) the high voltage output and antenna hook-up. Each of these will be discussed separately and compared to Lakhovsky's patent diagram in order to promote clear understanding.

(1) The Power Supply

Lakhovsky's patent diagram does not specify a power supply, but does show the unit needing to connect to a source of Direct Current, as noted by the (—) and (+) connections at the left of Fig. 1. Experiments by Hessel Hoomveld and myself suggest that the best source of DC in this case is a battery. The units definitely work better on batteries. A little market research, however, told me that most people would prefer a unit that could run for long periods, if necessary, and simply plug into the wall socket. Most people did not want to be bothered by battery charging protocols. Therefore, the power supply given here consists of a transformer, rectifier, and filter capacitor as shown in the schematic in Fig. 4.

(2) The Capacitor Charging System

Lakhovsky's patent diagram shows a primary coil, a magnetizable member, a secondary coil, the capacitor, and a device called the *trembler*. The purpose of the trembler is to mechanically make and break the DC current connected to the primary coil. This

arrangement produces pulses coming out of the secondary coil that can be used to charge the capacitor. The circuit we use here is a variation of the one developed by Klark Kent. It consists of a 555 timer chip, protected by some RF chokes, controlling a power transistor that makes and breaks the DC current to the primary of an automobile ignition coil. The pulsed output of the auto coil is then used to charge the capacitor. The high voltage diode between the coil and the capacitor is a necessary addition to this circuit because the capacitor does not charge properly without the diode in place. For you purists, the solid-state section can be replaced by a self-actuating mechanical relay that operates like the trembler. I don't use it because it makes a lot of noise and the solid-state circuit runs quietly and reliably. The solid-state circuit also gives us an adjustable feature to control the capacitor charging rate, like the adjustable trembler would. I have also added a third RF choke between the auto coil and the capacitor on the low voltage side to block the high frequency rebound of the capacitor discharge from feeding back to the power supply.

(3) The Spark-Gap Discharge Section

Lakhovsky's patent diagram shows the capacitor discharging through the primary of the output coil and the spark-gap. Our circuit is essentially the same here. This seems to be the heart of the system and I wanted to leave it alone. Still, a great deal of work went into researching the optimum design for the spark-gap. Straight, open air spark-gaps produce a subjectively harsh feeling in the field between the antennas and a nasty, irritating noise. By contrast, high vacuum, quenched spark-gaps (5 microns) don't work well in the circuit. The unit we are selling uses four enclosed spark plugs wired

in series. This arrangement produces the best trade-off between cost effectiveness, availability of parts, good circuit behavior, and gentle subjective feel in the output field. Many other systems were tried.

(4) The High Voltage Output

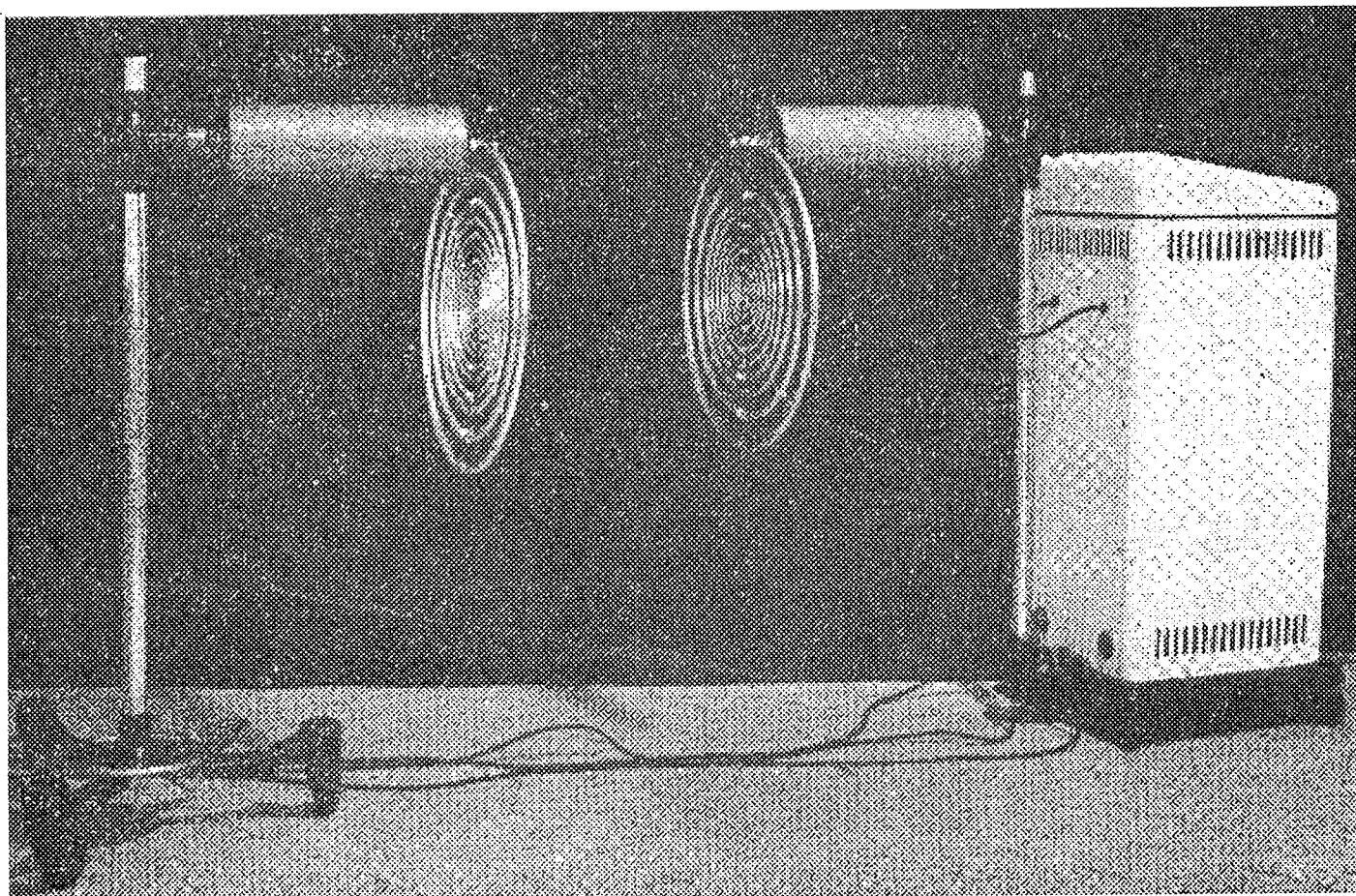
Lakhovsky's patent diagram shows a single output coil connected to the first and second ring of a single antenna (Fig. 1). We now know, however, that Lakhovsky's clinical units ran separate high voltage coils for each antenna (Fig. 2). Our system compromises between these two positions by driving a single high voltage output coil in a balanced manner to power two antennas equally. The output produces the required oscillating electrostatic field between the two antennas as well as the two inch corona discharge on each of them. I also center-tap the high voltage output coil and connect it to an earth ground. This arrangement allows the output to be driven in a manner that is consistent with Lakhovsky's clinical units by using only one high voltage output coil. Adding the earth ground connection to the output makes a big difference, in fact it makes all the difference in the world.

Well, that pretty much explains what we are doing and why. If anyone has any questions, give me a call at (505) 281-7554 and I'll be glad to help. I'd like to add just a few words about the unit that BSRF is making available to researchers. The unit comes complete and ready to use and is housed in a white plastic case about 15" x 15" x 5". It comes with two 15" diameter, silver plated antennas and two antenna stands made of clear acrylic. It also comes with an

instruction booklet and a money-back guarantee. This MWO produces a very penetrating but gentle effect. It builds and energizes the aura and promotes a deep, systemic relaxation. It causes a normalization of the pH of fluids, even neutralizing the acidity of a cup of coffee put in the field. If you are interested in owning one of these beautiful hand made units, please contact BSRF headquarters.

The only thing left to discuss is the real design of Lakhovsky's multi-ring antenna. There were a few more details that Serge told Hessel on his visit to Paris. The unit did not work inside a Faraday cage. Also, the unit did not work during full moon. He also said that the rings of the antenna were related to the planets. These statements reinforce the understanding of how intimately connected to nature the MWO must be in order to operate in the optimal mode. We can assume that a Faraday cage would block or distort the incoming cosmic radiation. And during full moon, we know that there is a collapse of the north-south seasonal flow of the chemical ether. Lakhovsky must have observed problems when the units were operated under these circumstances.

During one of our many trans-Atlantic telephone calls, Hessel had convinced me that the rings of the antenna were related to notes on a musical scale. But Serge's statement that the rings were related to the planets and Hessel's observation that the rings were clearly made of different metals seemed to confront us with another mystery. Interestingly enough, in a conversation with BSRF's Michael Theroux on this subject, he remembered seeing a document that related the relationship between the planets, the metals,



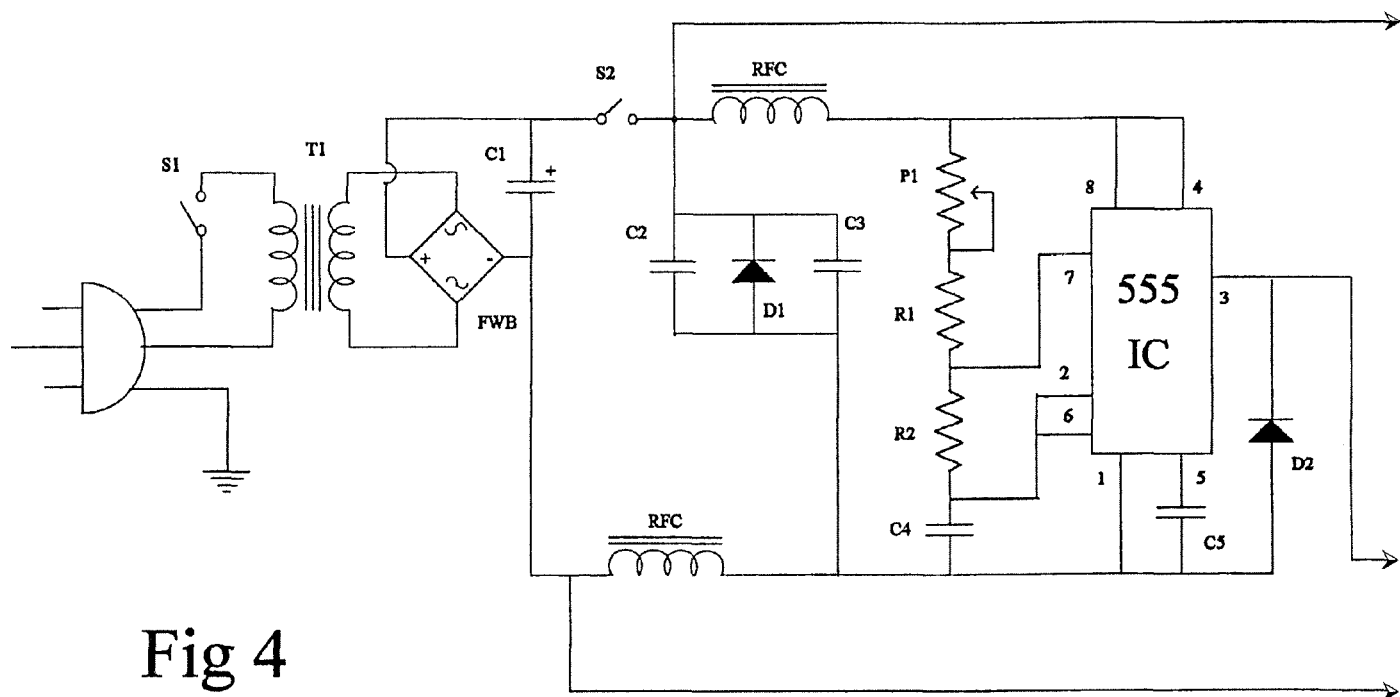


Fig 4

and the musical tones from some research done by an H. Kayser, published in Berlin in 1932. Since we know that Lakhovsky was working with some German doctors with his RCO and early earth energy research, we strongly suspect this information could be the basis for the development of the multi-ring, multimetal, tubular antenna during that same time period. This research document is included as a footnote to an article entitled *The Gravitational Wave* in the BSRF reprint of the **1950 Proceedings of the Scientific and Technical Congress of Radionics and Radiesthesia**. The following article, *The Song of Longevity*, contains Michael's insights into these relationships. In the future we are hoping to prototype some antennas and try them out to see if they broaden the action of the MWO to near universal effectiveness as Lakhovsky claims. Until then, the units we are making available function extremely well as a refined MWO power supply.

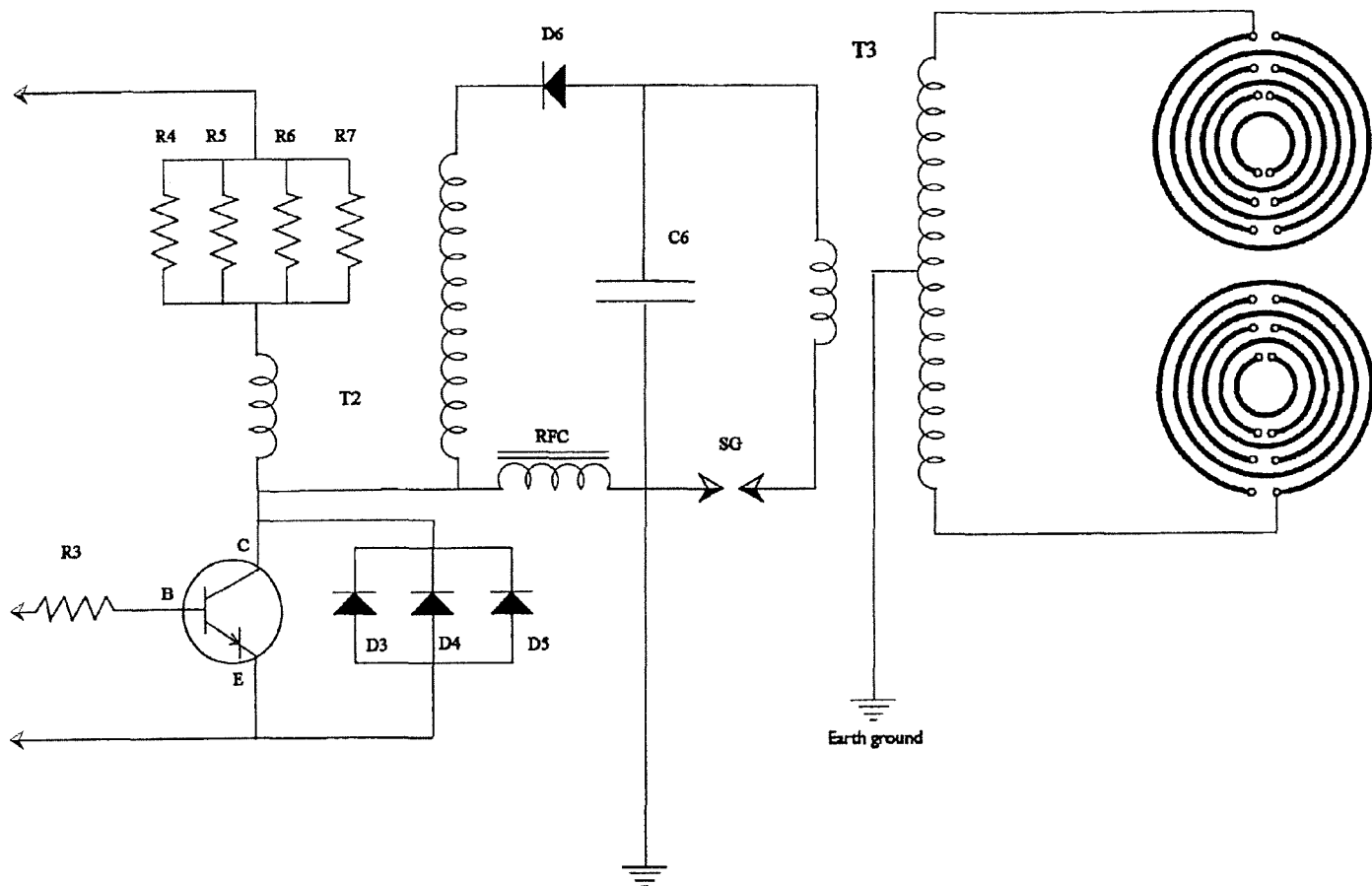
I know that some of you have enjoyed this flurry of articles on the MWO. I also know that some have felt that too many pages were given to this topic over the last few years. I can only say that being on the trail of this discovery has been exciting, especially this year. Now that it is nearing completion, I would like to acknowledge how much Tom Brown has contributed to this project. First, he kept the whole project alive by constantly up-dating the **MWO Handbook**. He took the initiative to translate and condense the two Lakhovsky titles, **Science and Good Health** and **The Earth and Ourselves**. These little books told us a great deal about Lakhovsky's work with earth energies and the Radio Cellular Oscillators, the forerunner of the MWO. He first sparked my interest and helped me overcome my reluctance to get involved. Even though he has not written any of the articles in this current series, our telephone conversations have been an integral part of my growing understanding of the MWO. During countless phone

calls, we continued to refine our collective understanding about what Lakhovsky was really doing.

This has really been a global BSRF project and the following people have all contributed in significant ways. A special thanks go to the following: Ralph Bergstresser, who apparently designed the "Magnetic Wave Oscillator" which has been the basis of MWO research for the last 30+ years; Bob Beck, for igniting interest in the MWO in 1963 by reproducing this basic "MWO" design; Riley Crabb, for printing that diagram in the BSRF Journal; Klark Kent, for actually building units that gave people something to work with and gave us something strong enough to whack on for years; Eric Dollard, for an irreplaceable education concerning the properties of high voltage dielectric fields, and for showing us the major divergences from Lakhovsky's actual work by the previous researchers; Ron Crossley, who reported on his first hand observations of Lakhovsky's MWO and helped track down numerous important details; Louis Schad, for bold and original thinking, and experimentation when things were looking pretty stuck; Larry Binger, for work with RCO circuits and sharing generously; Michael Theroux, for timely and insightful input; Jorge Resines, for multi-language translations, tireless research, and remarkable analysis of hard-to-find documents; Hessel Hoornveld, for the eye-witness account of a real MWO in operation, and for extensive clinical testing and in-depth experimentation with MWOs of various types in the Netherlands. Also, many thanks to all the other experimenters out there who have written letters to the Editor and kept the interest high. Thank you all again.

I have had the privilege of having all of this input to sort through and synthesize because these others were willing to share their knowledge freely. I am deeply indebted to all of them.

At this point, I consider the Lakhovsky MWO mystery essen-



tially solved. The following is the parts list that goes with the schematic in Fig. 4. for people interested in building a unit themselves.

Parts List

- T1 1 20VAC to 12.6VAC, 4.4amp transformer
- FWB Full Wave Bridge 250 volts, 6 amps
- RFC Radio Frequency Hash Chokes, 250uh
- C1 10,000uf 25v Electrolytic Capacitor
- C2 100uf 25v Electrolytic Capacitor
- C3 .047uf 50v Ceramic Capacitor
- C4, C5 .1 uf 100v Polyester and Foil Capacitor
- C6 .01 uf 15,000v Electrolytic Capacitor JAQ-15KMY0103
- IC 555 Timer
- R1 10K 1/2 watt Resistor
- R2,3 1.2K 1/2 watt Resistor
- R4-7 10 ohm, 10 watt Resistors
- D1-2 1N4148 fast switching silicon Diode
- D3-5 1N4004 200 volt, 1 amp Diodes
- D6 ECG 527A 15,000 volt Diode
- P1 50K Variable Potentiometer plus a knob
- Q1 ECG 247 100 volt, 12 amp Power Darlington
- S1-2 SPST Switches rated for 120VAC (plastic handle to reduce shock hazard)
- SG Spark-gap, four automotive spark plugs, enclosed, wired in

series, gaps set at .017"

T2 Automobile Ignition Coil for a 12 volt system

T3 Hand-made High Voltage Output Coil:

Primary: 5½ turns of #18 wire (insulated to 30,000 volts) wound on 2" ID PVC

Secondary: 5½ inches of tightly spaced #33 magnet wire (720 turns) wound on 1" ID PVC. Primary wound around middle of secondary. Secondary is center-tapped.

Notes on the parts list

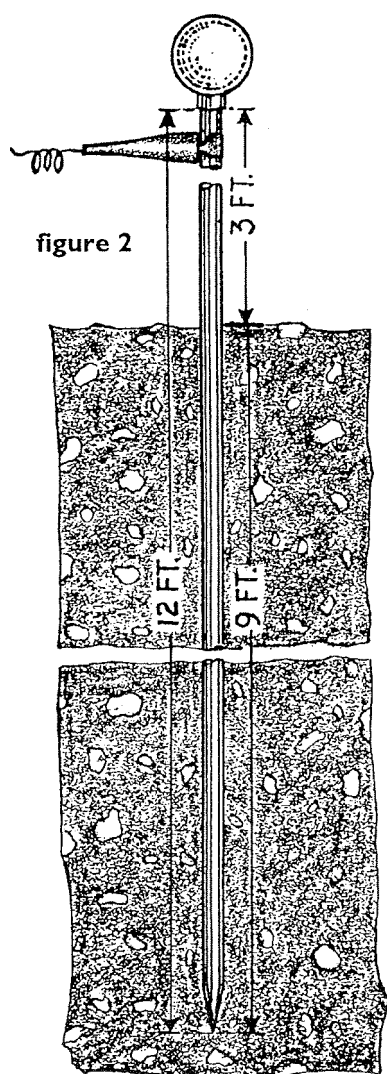
T2 should not be a hot-rod coil because they put out too much voltage and will destroy C6. An average coil for a V-8 will do just fine. C6 and D6 are hard to find, but they can be special ordered from an electronic parts store (not Radio Shack). Q1 must be protected by a heat sink. T1 and R4-7 get hot during operation. Our production units include a fan-blown cooling system, and separate indicator lights to show when the power supply is on and when radio frequency currents are present at the output. These features are not shown in either the schematic or the parts list. Also needed are a variety of wire, a grounded plug, and other miscellaneous hardware. Once production is in full swing, kits and/or hard to find parts will be available to home builders. Call (505) 281-7554 for more information on parts and on availability of completed units for research.

Happy building and good luck!

THE SONG of LONGEVITY

by MICHAEL THEROUX

"The earliest prehistoric symbols — the curves, spirals, etc. of the most ancient art — are attempts to render for the eye those primordial energies who have they're being in sound alone." Joscelyn Godwin — from the introduction to *Cosmic Music*



THE MOST FUNDAMENTAL of ancient symbols is quite unmistakably the circle. The next and most obvious progression of this archetype is found in the ever expanding and contracting universe, as depicted by a series of concentric rings. This symbol of concentric rings finds within its compass the models of both the spiral and labyrinth, and cannot be confined to its apparent 2-dimensional interpretation (and we will find its 3-dimensionality unfolding in the armillary sphere.) It is, therefore, no coincidence that Lakhovsky chose such a concentric ring design for his MWO antennas. The antenna system is truly the most important component in the device, and it is well known that Lakhovsky used simple, one-ringed and non-electrical contrivances in his healing experiments with plants.

The latest information concerning the design of Lakhovsky's multi-ring antenna for the MWO, would strongly suggest that he not only incorporated the alchemical correspondences of the metals and planets in the antenna's construction, but that the thirteen ring structure was based on the fundamental harmonics of music. (See *Lakhovsky's MWO: The Final Approach*, by Peter Lindemann)

Before assailing some of the possibilities in designing these antennas, it will be

of great importance to analyze a n d compare the nature of how a device such as this fits into the musical element, an also to try to interpret the means by which the musical correspondences are arrived at.

In 1918, a Russian inventor named Leon Theremin invented the first electronic musical instrument. Originally called the *Ætherphone*, this musical instrument (now universally known as the theremin) was played by moving the hands in the vicinity of two antennas, (not touching the instrument) hence its original name. The instrument produces its tones by the beat frequency oscillations of two radio frequency oscillators. The antenna, attached to one of the oscillators works like a variable capacitor in conjunction with the hand's presence. Changes in capacitance, effected by the proximity of the hand, actually raise or lower the pitch of the instrument. Very recently, I attended a lecture and demonstration of the theremin by Robert Moog, one of the pioneers of the synthesizer. In his lecture he provided video documentation of several of th early performers on the instrument, and

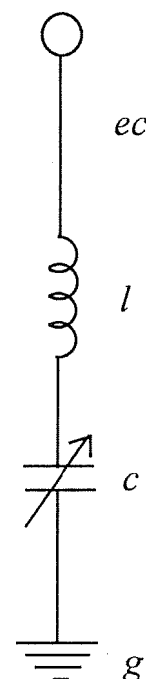


Figure 1

made curious mention that all of these people were still living – octogenarians and older. Leon Theremin himself is still alive at the ripe age of 97! In a lengthy conversation with Mr. Moog, I found that of all the people connected with the instrument, only one has since passed away. Nadia Reisenberg, the sister of one of the theremin's greatest virtuosos (Clara Rockmore) wasn't a theremin player at all, but the piano accompanist. Of course it would be pure speculation to assume that reason behind the theremin performers longevity was a direct result of their contact with the instrument. Many other factors would have to be taken into account.

There is a certain and most common thread which has been cryptically woven into all of these inventions and may or may not have been coincidental. With the Lakhovsky MWO, the theremin, and most certainly Tesla's Radio (as the foundation for these other inventions), one will find that not only is the ground essential for the operation of such devices, but the grounding circuitry is nearly tantamount in all. The basic circuitry is as follows (figure 1): Where *ec* is the elevated capacity, *l* is the inductive coil, *c* is the variable (sometimes fixed) capacitor, and *g* is the grounding apparatus. In the MWO, *ec* would be the multi-ring antenna. In the theremin, *ec* would be the pitch antenna, etc. The rest of the componentry can be found in each device as well, with little variation. Another device that easily fits into this category is the Cosmo-Electro-Energy Condenser invented by George Starr White (see figure 2 & 3). This device was used in the healing of various ailments and possesses the basic structure and symmetry of the others. This is not an electrical device though, and is quite simply connected to the earth.

I believe this most important feature found in all of these apparatuses is the key to understanding the true nature of how they work. With this basic circuit, one can radionically *tune* the earth energy for whatever purpose one desires. In all cases it is the interaction of the organism with this properly entuned earth energy (VRIL) that seems to produce results – whether electrically powered or not.

It now becomes quite apparent why Lakhovsky placed so much importance on ground energies, and constructed each

MWO according to individual specifications calculated in accordance with the local geography. Lakhovsky was tuning each device to a particular earth energy.

Lakhovsky was also very much interested in the sonorous possibilities of his devices as evidenced by his patent for more natural sounding loudspeakers and microphones (see **The Lakhovsky MWO Handbook Second Edition 1989**, compiled by Tom Brown). If the MWO antennas were constructed with concern for their musical properties (which would appear to be true) then several variables need to be figured into their calculation. Based on the information I received concerning the observations of Hesel Hoornveldt, the diameter of the outside ring was approximately 36 inches

and there were a total of 13 rings. From the photos in **The Lakhovsky MWO Handbook** I could only count 12 rings, but in any case we would be dealing with a ring system that was based on an equally tempered chromatic scale. This should, in effect, produce all of the desired harmonics related to the audio spectrum. But, it would not be possible to devise a chromatic scale from the formula he gave for his rings. Taking the wavelength of the device, dividing it by π to attain the radius, and then multiplying by any individual constant will not produce the desired results, no matter what the particular constant is. I personally tried it with the golden section and the twelfth root of two, neither of which would produce a musical scale, or the correct

geometrical symmetry. I consulted with researcher Eric Dollard about the problem, and he preferred a slightly altered method of using the golden mean. Thus, the calculation of the rings would alternate between Φ and $\sqrt{\Phi}$. I don't believe this would produce the musical tones desired, but it is a wise alternative in any case. What we are dealing with is the calculation of frequencies for a set of chimes. This can be most complex, and I have yet to see a definitive mathematical analysis. If we were dealing with nothing more than a resonant chamber such as in an organ pipe, the formula would be $\lambda = 2L/n$, and then the frequency can be determined by v/λ . But, in the case of a chime there would be the calculation of the resonant chamber and the 3-dimensional primary vibrator.

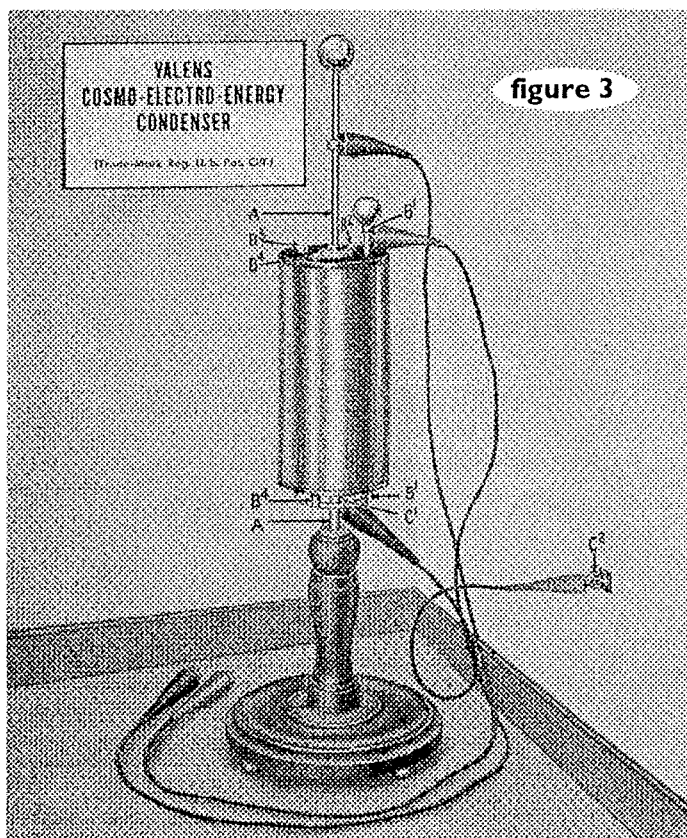


figure 3

I find that using $\sqrt{\Phi}$ produces the best results in construction, so that for a 12 or 13-ring antenna with an outside ring diameter of 36" Table A should be used. It should also be noted that the diameter of the tubing will decrease by the

It could be concluded from all of this that the two essential components in devices such as these are the earth and sound. This can be arrived at in many configurable fashions, and hopefully, this will give the experimenter valuable guidelines for continued research.

<u>Ring</u> <u>Number</u>	<u>Diameter in</u> <u>Inches</u>
1	36
2	28.3
3	22.2
4	17.5
5	13.75
6	10.8
7	8.5
8	6.7
9	5.25
10	4.1
11	3.2
12	2.5
13	2

HELP SAVE TESLA'S TECHNOLOGY!

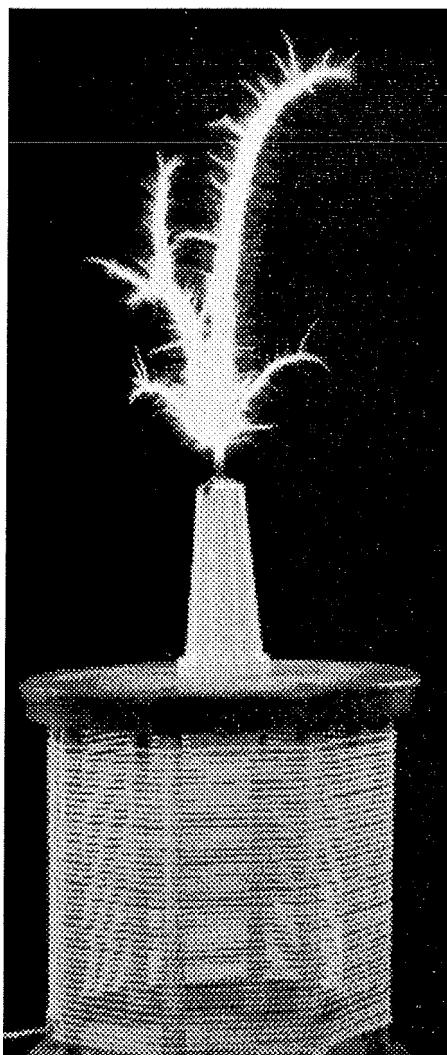
Eric Dollard, Tesla Researcher Extraordinaire, is battling many forces to continue research and preserve the historical Marconi Wireless site in Bolinas, California.

ERIC DOLLARD, well known to Tesla researchers and fans around the world, has solved the mathematical equations necessary to easy accomplishment of Tesla's major inventions such as Wireless Power and Worldwide Wireless Broadcast of information! But it has been a rocky road, both for real Tesla research and for Eric's attempts to continue this research.

Nikola Tesla developed a wireless "radio" system based on *non-electromagnetic* propagation. Marconi brought this into more practical usage, but he had to make important changes to avoid the Tesla patents. Radio Corporation of America (RCA) was formed with/by David Sarnoff, Marconi's chief telegrapher, to take over the Marconi system and begin with what we now call radio, that is, amplified *electromagnetic* propagation of information signals. This fine point is lost on all modern, popular research into Tesla's works, and most modern explanations avoid what Tesla himself stated, and instead insert explanations that avoid common sense and leave one with the inability to reproduce the actual Tesla experiments.

Eric Dollard was raised on old-time radio operations and thoroughly understands both the Tesla/Marconi style systems and the less efficient modern radio that overtook it due to corporate interests, rather than scientific. Eric was given all the old materials in "Building Number One" at the Bolinas Marconi site by RCA so that he could preserve them and continue his research, but mysterious forces worked to destroy the equipment and run Eric out of his lab. The building now sits vacant, half stuffed with junk by a non-profit group, named Commonweal, who have somehow gained control of one of the prime pieces of real estate on the California coast and use it for personal parties and retreats far outside their original stated purpose of "cancer research". MCI corporation has become heir to the RCA rights to the property and may be interested in the historical aspects of the building. The MCI half of the building contains a decommissioned transmitter, BL-10, which could be instantly put into active research service once power is reconnected to the building.

Eric has said that getting run out of Bldg. #1 was a blessing in disguise, for the fact that his lab was reduced to a notebook, but in reality he had been shattered by the destruc-



Golden Ratio discharge from authentic Tesla Magnifying Transmitter built by Eric Dollard. Not your average "Tesla Coil"!

tion of a major scientific resource built up through his life. However, in his notebooks he solved the mathematics necessary to actually engineer Tesla's amazing claims. Eric has been able to work sporadically in small, unfunded labs, under uncertain conditions, and has physically demonstrated that these principles are real. Video tapes of some of these experiments are available through Borderland Sciences. Today, in 1993, Eric's lab is a small lot in Bolinas, California where he is capable of demonstrating through-the-ground radio transmission without antennas. The Marin County Planning authorities have been pressuring the site owners intensively in the hopes of running Eric out, but the lab still

exists, holding on by tenuous threads.

Tesla's research has been the focus of many researchers and groups, some of them seriously pursuing the pure stream of work, but many of them attempting to "explain" Tesla in modern terms, a generally impossible task as even Tesla himself stated. The goofier the explanation, the larger the audience attracted to it. *But this must change now.* We have at hand one man who can not only explain what Tesla was really doing in his work, but has produced the engineering mathematics necessary to evolve into a tremendous new technology.

What is immediately necessary is:

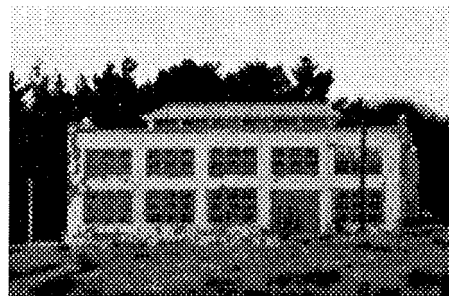
1. People who are willing to help recover the historical Marconi site from private use by the wealthy and powerful and restore it to its proper historical perspective. The time is now, as Building #1 is deteriorating. How Commonweal gained private access to property under U.S. Park Service jurisdiction needs to be fully investigated.

2. People who have the financial and/or other capacity to get Eric into a stable lab so that this research can be completed and documented.

3. Serious Tesla researchers who want to continue and enhance their work, and Tesla fans who are tired of being dazzled and amazed with useless information and want the facts of the matter, and who can contribute in some way to the preservation of Eric's work and equipment.

**Contributions should be sent to:
Eric Dollard, P.O. Box 644
Bolinas, California, 94924**

Eric's published work are available from:
Borderland Sciences Research Foundation
P.O. Box 429, Garberville, California, USA



Building Number One
Marconi Wireless Site, Bolinas, California

RESEARCHES INTO TELLURIC ENERGY

by Dan Winter with Leroy Chambers

It has been almost a year since my friend Gerry Vassilatos reported to me that both he and Michael Theroux had independently recorded the energetic currents of the earth's interior. Their procedure is very straightforward and accessible for researchers. Ordinary tape recorders and microphone mixers are used in their process with telluric energies taken through ground rods. Ground-rod inputs used by these researchers include dipolar varieties (Cu-Zn, C-Fe, Fe-Zn); monopolar probes of elemental metals (Sn, Al, Cu, Zn, Fe, C, Ag, Au); buried monopoles of minerals (pyrites, sphalerite, amethyst, galena); chemical substances (MnO₂) in pyrex tubes; and various vacuum tubes. Probes are directly connected to tape recorders. The unfiltered tape recorders then are allowed to "float" electrically.

Tapes produced by this method were then played through a home recording studio at various speeds. The judicious use of a graphic equalizer allowed the experimenters to conclude that they had indeed detected and recorded true telluric energies. Each type of substance was found to give different signals.

Further into this research Gerry sent me a sample tape which I shared with my friend and fellow researcher Leroy Chambers. As expected, Gerry's use of single-ended pickup had recorded unbalanced ground currents from the 60 cycle power mains—but even a person with a "tin ear" could readily discern that much more than power mains current was actually recorded.

Preliminary instrumental analysis by Leroy showed two distinct results. After filtering out the power mains current (which can have strong harmonic content to the 6th or more harmonic) it was found that the elemental probes detected a signal having a complex high frequency spectrum with peaks extending to 17 Kilocycles.

The mineral substance probes showed a much simpler high frequency spectrum. The significant difference found among the minerals was noticed when the unfiltered tapes were viewed on an oscilloscope at low trace speeds. The latter signal was seen to be amplitude modulated (10 to 30% modulation) by a complex sub-audio signal. A speculation has been

put forward suggesting that this modulation signal resembles the monopole gravity wave signals reported by Gregory Hodowanec ("Gravity Waves", Radio-Electronics, Vol. 57, no.4, April 1986).

It is hoped that this observation can be confirmed or denied in the very near future. It would be interesting if it were found that gravity waves cause large scale changes in telluric currents! In the meantime, a series of electric wave filters will be made available to the researchers for the suppression of electric utilities ground currents. These filter schematics will be made available to Borderlands for all to study and use when completed.

The tape which Gerry sent to us in May 1992 devoted an entire side to original work done by Michael Theroux in California. Michael's original aim was to explore and record the VLF energies found in the earth's interior. This tape included recordings which accidentally registered events of the Petrolia Earthquakes (May-June 1992, BSRF). This recording included two distinct VLF events of April 26th (12:42 A.M.).

The method used for these recordings was the dipolar arrangement. Metal rods are driven to 1 foot depth and are spaced from 2 to 10 feet apart. Each rod is phono-jack connected directly with a battery operated cassette recorder.

Leroy Chambers has done a preliminary instrumental analysis of these recordings using an oscilloscope, a wavemeter, and a chart recorder. We did notice the sferic sounds reported by Michael. After filtering out power mains current harmonics it was discovered that the tape was dominated by 5 Kilocycle signals.

The many "pinging" signals heard on the tape were seen to be of relatively high amplitude 5 Kilocycle current. On cursory examination it appears that these "pings" exhibit an increase in occurrence-frequency just before the earthquake event and a tapering off of occurrence-frequency after the event.

Leroy Chambers is in the process of making an electronic circuit to verify this observation. But, even if the observation proves true, it is not known whether this signal "marker" holds true for earth fault systems in general. There is a possibility that each fault system has

marker signals which remain idiosyncratic.

The recognized natural VLF signal sources of the earth's magnetosphere exhibit large I/F noises and erratic (random) amplitudes. Further research needs to be done! The actual partial recording of the earthquake event (tape recorder was hurled to the cabin floor) features large amplitude "gonging" sounds which are almost musical. This section of the "Earth Tones Tape" (available by BSRF) has not yet been analyzed.

There was one other surprise in the Petrolia Earthquake tape recording. After rigorous filtering a continuous low-level 5 Kilocycle wave was discovered. This signal is not yet understood. Please examine the graphic record.

It is to be understood that during the so-called "World-Series" earthquake (south of San Francisco) that observations of VLF waves in the earth were made by a Stanford physicist near the quake epicenter. The recording showed that (just prior to the quake event) an intense burst of VLF energy was detected. Michael Theroux recorded the same event.

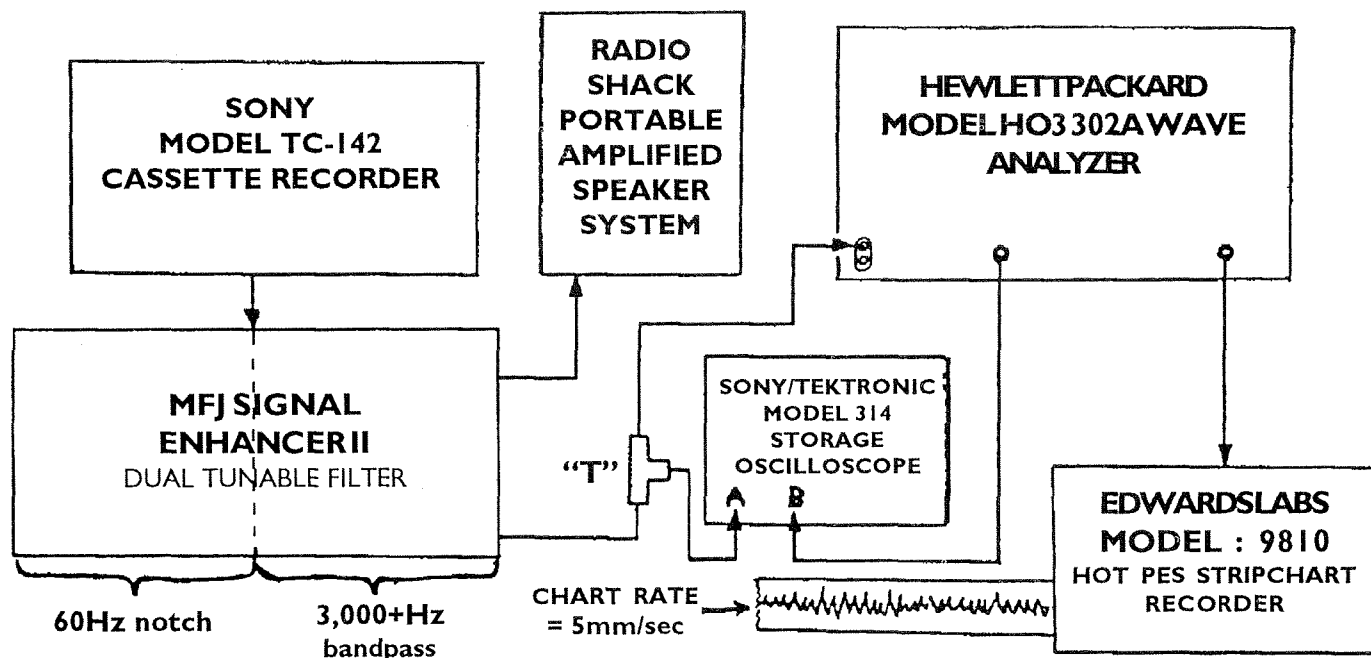
This correlation of VLF burst energy is an undeniable record. A large-scale investigation is now being funded to create an earthquake watch network. VLF current, VLF bursters, and earthquake activity will be monitored and correlated.

How can VLF currents trigger earthquakes in stress-loaded earth faults? The mode of operation involves what I call "Edison's Other Effect". The well-known Edison Effect was a discovery dealing with the conduction of thermionically generated electrons: the basis of the vacuum electron tube. What I call "Edison's Other Effect" was his discovery dealing with electro-frictional force changes.

When a metal stylus is brought to bear on a rotating piece of wet chalk, normal frictional forces are observed. This friction largely vanishes when an electric current is passed between the stylus and the chalk. The explanation is simple. Current causes electrolytic decomposition of the wet chalk releasing alkaline and alkali earth ions. These make the mechanical junction slippery. This is the same slipperiness which we experience when attempting to pick up a wet bar of soap.

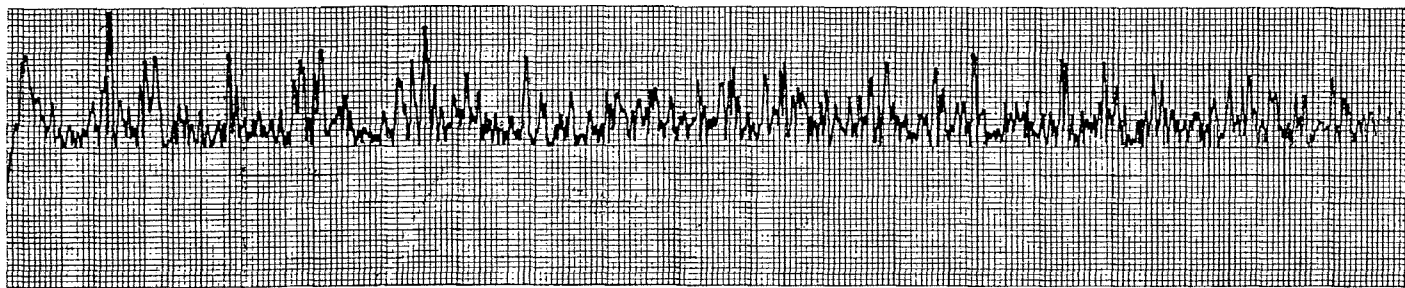
Shortly after this discovery, Edison used this as part of an electric clutch in a telephonic device. It is my suggestion that if large enough VLF surges appear across the faces of stress-loaded earth faults (proper chemical composition and wetness being observed) the Edison slippage can result in triggering an earthquake. Future research work would necessarily include correlations of Gregory Hodowanec gravity waves and earthquake VLF.

Borderlands readers and researchers may wish to discover predictive elements in the



ABOVE: Setup used by Leroy Chambers for instrumental analysis of tape made by Michael Theroux.

BELOW: Sample of the stripchart obtained showing the bursts of 5KHz energy which was heard as “pings” through the speaker. The chart rate used was 5mm/sec.



VLF energy spectrum associated with earthquakes. The method used by Gerry Vassilatos and Michael Theroux is straightforward and inexpensive. VLF earth current stations may be set up anywhere using such means.

All that is needed is a battery operated cassette tape recorder (having an external microphone jack), a length of wire (soldered to jack center-tap), a metal probe-rod (sanded iron coat-hanger) driven to 1 foot depth, recording tapes, and log book. Preparation of the phono-jack is simple. Purchase proper size jack at local supply store. Unscrew plastic housing. Solder lead wire to center jack-tap. Screw plastic housing back on. Plug in jack. Wrap lead wire on ground rod free-end. Record and log.

[WARNING!! USE ONLY BATTERY POWERED CASSETTE RECORDERS. Do not use transformer powered adapters, battery

eliminators, or wall-current voltages. Faulty ground connections used as probes could give FATAL SHOCK if accidentally contacted].

Having set these arrangements you are ready to make observations. You could adopt a regimen of 5 to 10 minutes during morning and evening hours. You will gradually become aware of the normal VLF activity of the earth's interior when you equate what you have recorded with the times during which the recordings were made. By measuring and comparing recorded signal strengths one may make valuable and original telluric discoveries.

You may make recordings from two pairs of rods. Rods may be driven into ground with orientations to cardinal points of direction (N-S and E-W pairs). The rods can be set 10 feet apart and driven to a depth of at least 1 foot.

Vectors can be assigned to any recorded disturbance. Two vectors from 2 different

observation stations would permit the location of a disturbance if the same stations are some distance apart. The vectors can be computed trigonometrically or resolved graphically.

When you have recorded VLF events you will want to arrange for an instrumental analysis of your tape collection. A suggestion is to send a copy of your significant cassettes (with notes) to me c/o Borderlands. Dates, times, and approximate geographic location would be of great value along with the tapes. Borderlands will publish regular collated reports when enough data is continuously compiled. *Please send us those tape copies!*

[NOTE: EARTH TONES is the BSRF cassette tape transcript which includes several earthquake events, numerous whistler choruses, and substance tone-signatures. \$9.95 plus \$2 P&H].

DANIEL DRAWBAUGH, OF EBERLY'S MILLS, ASSIGNOR TO THEODORE GRISSINGER, OF MECHANICSBURG, AND JACOB H. GRISSINGER AND JACOB E. SHETTEL, OF SHEPHERDSTOWN, PENNSYLVANIA, ONE-FOURTH TO EACH.

IMPROVEMENT IN EARTH-BATTERIES FOR ELECTRIC CLOCKS.

Specification forming part of Letters Patent No. 211,322, dated January 14, 1879 ; application filed September 20, 1878.

To all whom it may concern:

Be it known that I, DANIEL DRAWBAUGH, of Eberly's Mills, county of Cumberland, and State of Pennsylvania, have invented an Improvement in Earth-Batteries, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification.

The nature of my invention is briefly stated to be an earth-battery consisting of an electric couple of plates of opposite electric properties, peculiarly protected by certain other substances, and prepared as a new article of manufacture by having said protecting substances applied fixedly to said plates by any suitable adhesive.

The object of my invention is to provide a suitable means to procure and apply to use native electricity from the earth to replenish permanent magnets at intervals between times of their engagement—as parts of motor mechanism employed to run clocks, sewing-machines, or other machinery—said magnets being thus kept saturated with the electricity derived from the earth to a maximum degree, or to a degree above the power required to run any given motor.

In the accompanying drawings, O¹ represents a copper plate, coated by a layer of powdered coke, forming an enveloping-body, V², thereon, and fixed thereon by any suitable adhesive ; and O² represents a zinc plate, coated or covered by a layer of felt, V³, or any texture formed of hair, wool, or of other animal matter, stuck on said plate by any suitable adhesive. Said plates are provided with said coats V² and V³, respectively, for two purposes—first, to form effectual connection between the plates and the earth in such manner that the plates may be protected against oxidation and consequent corrosion and change of constitution ; second, that said plates may be a complete new article of manufacture, having their adherent substances fixedly attached to them, as stated, so that they need only be embedded in the earth to be ready for use when the battery connections are made with any suitable train it is designed to move.

In the accompanying drawing, Figure 1 represents a front elevation of the skeleton of a vase-clock, the vase, train of wheels, dial, and

hands being omitted. Fig. 2 represents a top view of the same. Fig. 3 represents a sectional view of a bracket, from which the actuating mechanism of the clock is suspended. Fig. 4 represents a bracket, on which the electric brake is located. Figs. 5 and 6 represent the zinc and the copper plates, respectively, shown protected by coatings, as in my improved earth-battery. Fig. 7 represents an edge view of the subjects of Figs. 3 and 4, and sections of clock-standard and suspenders of magnets.

The skeleton-clock above referred to is herein described only in part, as it is herewith connected merely as an illustration of the application and use of my improvement in earth-batteries, it being reserved for a more complete specification in a separate application for patent, hereafter to be made.

Said copper and zinc plates O¹ and O², respectively, are provided with insulated conductors Y Y², respectively, which are joined to said plates by soldering ; and they are connected at their other extremities, by the binders K k K' h', with conductors on the under side of base A, and on the rear side of uprights N with the electro-magnet Q Q' by conductors m n, said electro-magnet being a part of my earth-battery, and it is suspended by rod P from bracket B, to which it is adjustably connected by the thumb-nuts t t' on opposite sides of the frame E.

M represents a permanent magnet, such as it is the object of my earth-battery to supply with magnetism at intervals of its engagement. Said permanent magnet has its poles z c arranged to vibrate horizontally by or past the poles of electro-magnet Q Q', and it is mounted centrally in the balance-wheel L, to the hub of which it is adjustably clamped by screw W. Said balance-wheel L and magnet M are unitedly suspended by a thin strip of spring-steel, C, on bracket B, and therefore they are allowed limited vibration, actuated by the power of attraction and repulsion of the magnets M and Q Q', said steel strip or ribbon of steel C acting as a torsion-spring to limit the vibration. A rod, D, also connected with balance-wheel hub L', loosely passes through bracket B, and has firmly fixed on its top the cross-head g, which is provided with the pins d d thereon, by which the pallets p p are held balanced on said cross-head, and are actuated thereby while it vibrates or rocks to

move the ratchet-wheel H, which may move any suitable clock-train mounted on base-plate Z.

On bracket S a pivoted plate, R G, is applied dividedly to the eccentric part f on rod D, in such manner that the device acts as an electric-circuit opener and closer alternately at every forward and backward stroke of the balance-wheel L.

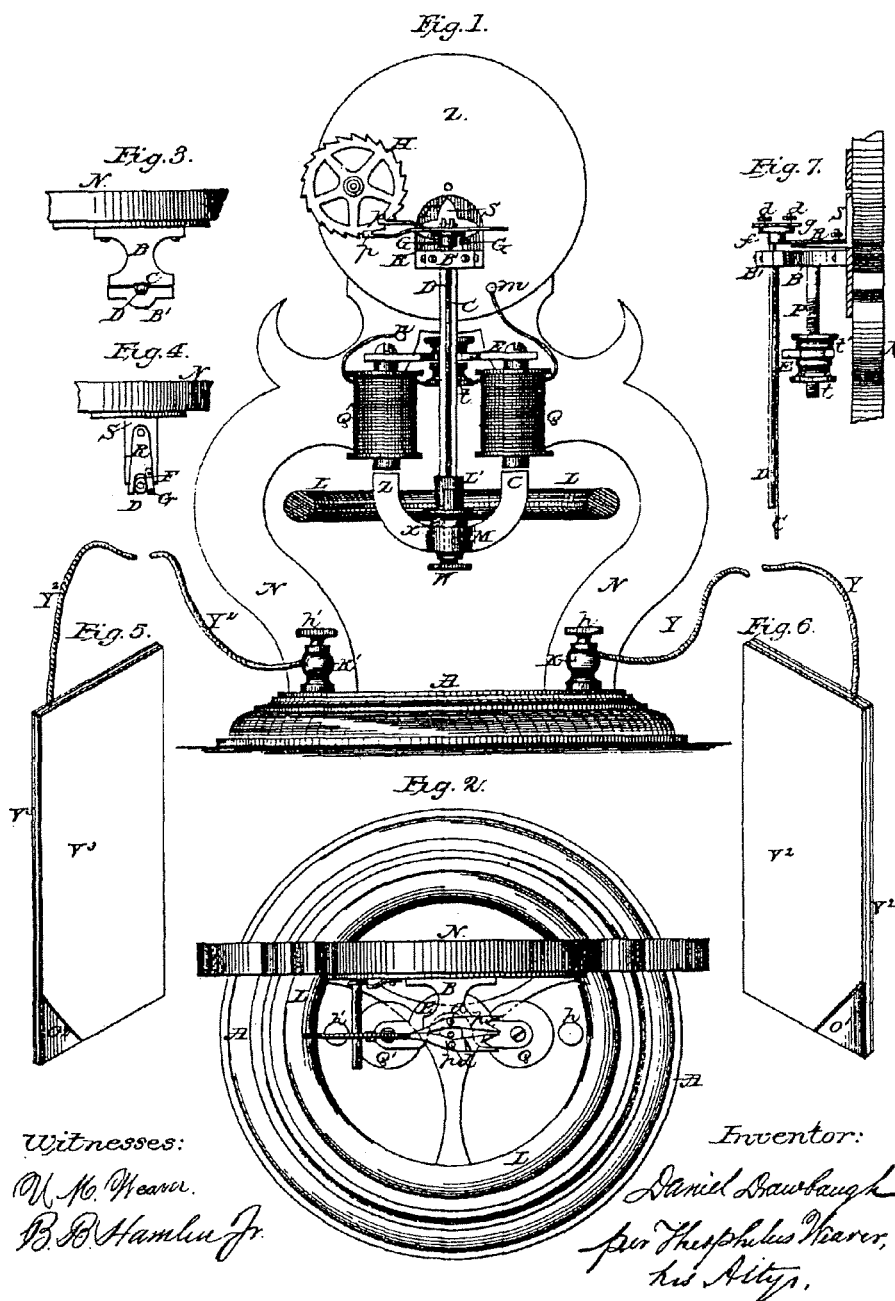
The object of the last-described device is to complete the circuit from the earth through the electro-magnet Q Q' at every return stroke of said wheel L, and thus replenish the permanent magnet M at the intervals when repulsion of the poles of the magnets is occurring.

It is well known that when permanent magnets are being used in attracting and repelling while actuating parts of machinery in motors they gradually lose their maximum of magnetic power, being successively more and more depleted or robbed at every stroke or pass of the impelled mechanism, and therefore the motor becomes unreliable in all situations where uniformity of motion is required. To prevent such exhausted or impaired condition of such magnets I employ my improved earth-battery, coupled in suitable manner with an electro-magnet, arranged in proper proximity to such permanent magnet to supply it constantly to saturation with electricity or native magnetic influence from the earth. My improvement, therefore, insures the permanence of the natural magnet as a regular power in a motor, and it may be successfully applied to clocks, sewing-machine motors, and other machinery. The clock in the accompanying drawing suggests by its form how it may be used on vessels at sea, as the battery may also be employed in water.

Having thus fully and clearly described my invention, what I regard as new and useful, and what I desire to secure by Letters Patent of the United States, is embraced in the following claims :

1. As a new article of manufacture, an earth-battery or couple composed of a copper and a zinc plate, both protected fixedly by enveloping bodies of coke and felt, respectively, or of equivalent substances, applied by adhesives to said plates, ready made for use, in the manner and for the purpose substantially as set forth.

2. The earth-battery or electric couple



Witnesses:
W. Mc. Weaver.
B. B. Hamlin Jr.

Inventor:
Daniel Drawbaugh
per Theophilus Weaver,
his Atty.

composed of the copper plate O¹, fixedly protected by coating of coke V², and the zinc plate O², fixedly protected by coating of felt V³, or said plates fixedly protected by equivalent substances, in combination, by conductors, with a permanent magnet in a motor-train, for replenishing said magnet with electricity from the earth through an electro-magnet, Q Q¹,

substantially as set forth.

In testimony that I claim the foregoing as my invention I have hereunto set my hand this 13th day of September, 1878.

DANIEL DRAWBAUGH.

Attest:
THEOPHILUS WEAVER,
PETER STUCKEY.

This Patent is from VRIL Compendium IV.

THE VRIL COMPENDIUM

Author and researcher Gerry Vassilatos has spent several years scouring Victorian scientific archives in search of the arcane, the anomalous and the amazing. The fruit of these searches is the release of a singular work of astounding depth and immense power...**THE VRIL COMPENDIUM**. This project is an ongoing major work which is to be published in successive complete volumes. The chief academic value of the **VRIL COMPENDIUM** includes the fact that its documents, photographs, articles and extracts are taken, not only from a wealth of Victorian sources, but from legally weighty ones as well, such as the U.S. Patent Register. Each volume is a treasurehouse of patent documents in whole form.

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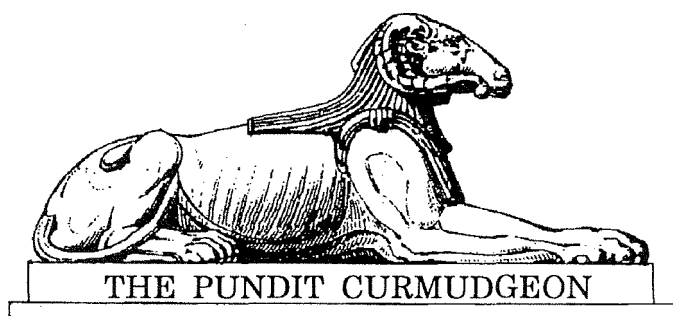
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PERPETUAL MOTION VIA SURFACE TENSION

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SMILE—it's perpetual motion time again. As reasonable, thinking persons we all know that in fact there is no such thing as perpetual motion. Virtually everyone who has ever heard of the subject can recite the liturgy as to why it now and forever will be impossible to achieve this objective with reference to the gospel of the Laws of Thermodynamics. A naysayer producing such pronouncements can be expected to give a corresponding sermon as to why water cannot run uphill.

But water *can* run up hill. As reported in an article in *Science*, 256,1539 (1992) and discussed in the authoritative American Chemical Society publication *C & E News*, June 15, 1992, p. 19, a Dow Corning Corp. physicist (Manoj K. Chaudhury) and a Harvard University professor (George M. Whitesides) have developed a surface which gradually changes from being hydrophobic at its lower end to being hydrophilic at its upper end. This surface is interesting because a drop of water will move up hill over the surface, counter to the force of gravity.

This brings to mind past discredited efforts to achieve perpetual motion by having water move or flow up hill. Such efforts are not those involved with schemes such as that shown in the accompanying Fig. 1 taken from Dircks' *Perpetuum Mobile*, First Series (volume), 1861, page 289. The contrivance shown in this figure was invented by a Mr. Rangley. It was intended to use the force of a downwardly directed stream of water against a water wheel to provide more mechanical power than is necessary to operate a pump A to raise the same quantity of water from a sump so that it can be reused to operate the structure.

On the basis of common sense no one can expect this Rangley device to

Figure 1

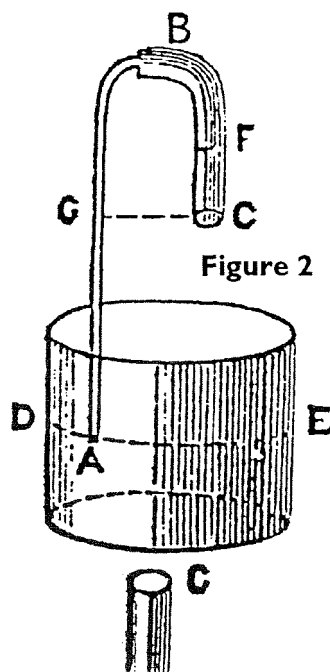
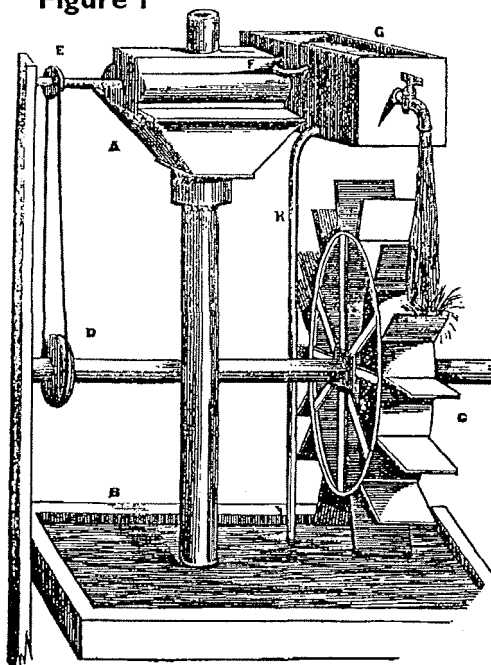


Figure 2

work. There have been other proposals to provide continuous or perpetual motion by having water move upwardly through the use of surface tension instead of a pump. This type of concept apparently dates back to at least 1720 when, according to Dircks in his *Second Series* (volume) p. 119-125, the following Fig. 2 and other related figures were published by a James Jurin in the philosophical Transactions of the "Royal Society". Presumably he was referring to a British Royal Society.

What makes this Fig. 2 particularly interesting is the following written description of how the structure shown in it operates:

"... This siphon being filled with water and the orifice A sunk below the surface of the water DE, my friend reasons thus

"Since the two columns of water AB and FC, by the supposition, will be suspended by some power acting within the tubes they are contained in, they cannot determine the water to move in one more way, or the other. But the column BF, having nothing to support it must descend, and cause the water to run out of C. Then the pressure of the Atmosphere driving the water upward through the orifice A, to supply the vacuity, which would otherwise be left in the upper part of the tube BC, this must necessarily produce perpetual motion, since the water runs into the same vessel, out of which it rises..."

Dircks also discloses several other perpetual motion type devices which appear to be in the nature of extensions of the concepts of the structure shown in Fig. 2. The structure disclosed by Justin is more significant to the developments by Chaudhury et al than any of these other disclosures in that it appears that there is a chance that the type of device suggested by Justin can be made to "work" by

modifying it so as to use a Chaudhury et al graduated hydrophilic and hydrophobic surface within a restricted passage, perhaps not even a capillary passage.

One cannot help but wonder if this type of thing has been tried by Dow Corning and at Harvard. Unfortunately it is all too easy to extend this type of speculation to other structures. Since it is clear that a Chaudhury et al type surface will interact with water so that the water will move up the surface is there a chance that water will flow up a fixed inclined surface and then down as indicated by the arrows in Fig. 3 if the upper surface is of the variable hydrophobic-hydrophilic type.

If, as seems probable, a Chaudhury et al type surface will only operate to move water uphill when the water is in the form of discrete drops it would be possible to modify the Fig. 3 type structure as indicated in Fig. 4 so that the drops of water which moved against gravity along a surface would drip off a point at the top of the surface on to the bottom of the same or another similar surface.

No genius is required to extend this type of speculation to a walking beam

structure as shown in Fig. 5. With this type of mechanism the upwardly moving water would flow over a hydrophobic-hydrophilic graduated surface into an upper receptacle at an upper end of a walking beam. When the weight of the accumulated water gets high enough the beam would "dump" as indicated in phantom, restoring the original weight balance. The beam would then resume its original position as a result of gravity.

If a Chaudhury et al surface will only raise drops of water a device as shown in Fig. 5 could be modified as indicated in Fig. 6 so that the water dumped after accumulating in a reservoir could flow back to a point where it could drip on the

Figure 3

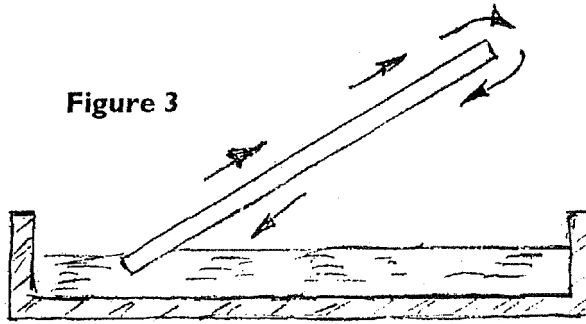


Figure 4

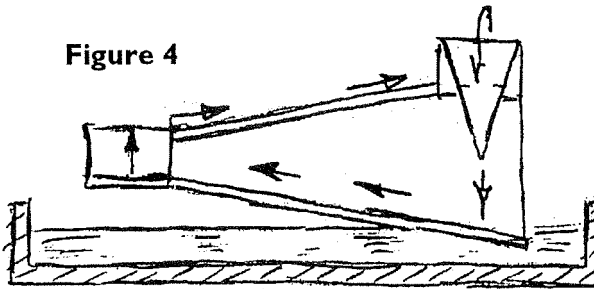


Figure 5

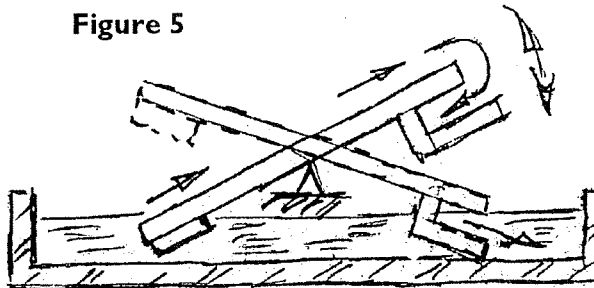
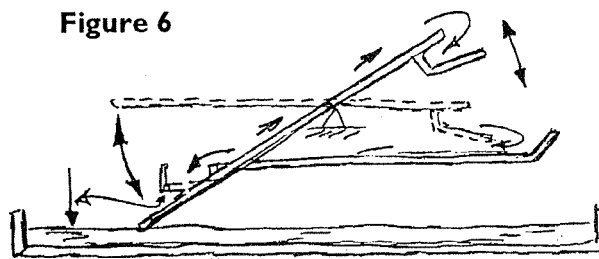


Figure 6



lower end of the beam after the beam had pivoted back to its original position. This would require carefully consideration of resetting time of the beam and the construction of water return so that the beam would reach an initial position before the recycled water is returned to it.

If any of these proposed structures or various related devices do in fact "work"

probably someone will raise the issue that any such an operative structure is not a perpetual motion device because it "works". This invites hair splitting definitions of a type covered in another column. As a practical matter any such suggested device would be a perpetual motion contrivance because of its relationship to what have traditionally been classified as perpetual motion devices by Dircks and others.

Logically one can expect some erudite souls to say "so what?" to this speculation about achieving perpetual motion through surface tension. These individuals would question the purpose of the preceding speculation and of investigating these and related possible perpetual motion devices employing subtle energies when it seems obvious that no significant useful mechanical power can be expected to result from any of these devices. To the bean counter, bottom line mentality characterizing the vast majority of US management, the question is valid.

Nothing having a direct, immediate, significant benefit to mankind can be expected from using suggestions from the past with the Chaudhury et al type surface even if operative perpetual motion devices result from such activities. However, what about tomorrow? If in fact such devices do operate there is reason to believe that in time the concepts within them can be extended into other useful structures. If in fact structures within the scope of this speculation do not work, then so what? We learn much from failure.

Hopefully some reader will have the resources necessary to try out some structures as suggested and report back. Perhaps there has already been unannounced experimental work relative to such devices.



WHERE ELECTRICAL SCIENCE WENT WRONG

by Bruce dePalma

"It is characteristic of fundamental discoveries, of great achievements of the intellect, that they retain an undiminished power upon the imagination of the thinker. The memorable experiment of Faraday with a disc rotating between two poles of a magnet, which has borne such magnificent fruit, has long passed into every-day experience; yet there are certain features about this embryo of the present dynamos and motors which even today appear to us striking, and are worthy of the most careful study."

- Nikola Tesla, 1891, New York City, New York

Law of Equipartition of Energy: In a given thermodynamic system, the total energy will subdivide itself equally amongst the characteristic modes of the system.

After Michael Faraday performed the initial experiments resulting in the discovery of the one-piece homopolar generator of December 26, 1831, figure (1), he devoted considerable effort to reconcile the appearance of generated electrical potential in the apparatus with his conceptualization of the cutting of flux linkages by a moving conductor.

Although Faraday never adduced an experiment to prove the cutting of flux linkages in the axially rotating magnet experiment, he was troubled to his last days about his interpretation of his experiment. It took until 1978 when DePalma, reference (1), did the critical

experiment to determine if the form of electrical induction was the same as the flux cutting originally proposed by Faraday. The problem has been restated by other workers who would attempt to determine whether flux lines rotate with, or are spatially independent of the axially rotating magnet. To date, no experiment has been found either to confirm or disprove the axially rotating flux line hypothesis, reference (2).

The laudable efforts of Clerk-Maxwell to express in mathematical form the results of the electrical experimentation of Faraday reflect the uncertainty which he had over the interpretation of the 1831

experiment. The result was that Maxwell did not consider the problem at all, or felt he had nothing more to offer.

For those scientists who consider *mathematical* expressions of physical laws as the only possible descriptions of physical reality, having no mathematical description is tantamount to *no physical reality*.

Electrical science, which is considered to be completely known, has been ultimately reduced to a completely self-consistent set of equations which are suitably stored in computer memories and are used to design motors, generators, transformers and other sorts of familiar

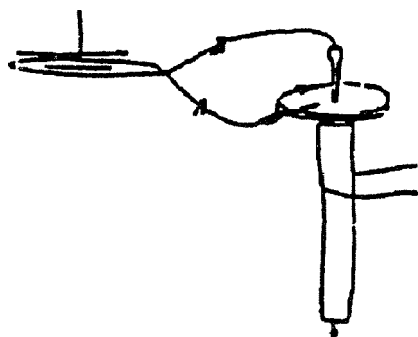


figure 1
Test of a rotating magnet by
Michael Faraday
26 December 1831.

255. A copper disc was cemented on the top of a cylinder magnet, paper intervening, the top being the marked pole; the magnet supported so as to rotate by means of string, and the wires of the galvanometer connected with the edge and the axis of the copper plate. When the magnet and disc together rotated *unscrew* the marked end of the needle went west. When the magnet and disc rotated *screw* the marked end of the needle went east.

256. This direction is the same as that which would have resulted if the copper had moved and the magnet been still. Hence moving the magnet causes no difference provided the copper moves. A rotating and a stationary magnet cause the same, effect.

257. The disc was then loosed from the magnet and held still whilst the magnet itself was revolved; but now no effect upon the galvanometer. Hence it appears that, of the metal circuit in which the current is to be formed, different parts must move with different angular velocities. If with the same, no current is produced, i.e. when both parts are external to the magnet.

electrical hardware.

The first place electrical science went wrong is when electrical phenomena which were not subject to unambiguous mathematical interpretation were simply omitted from electrical curricula.

The second place electrical science went wrong is concisely illustrated in a sequence of evolution of electrical machinery abstracted from "Exciting Electrical Machines", by E.R. Laithwaite, D.Sc., Ph.D., C.Eng., F.I.E.E., F.I.E.E.E. Professor of Heavy Electrical Engineering, Imperial Technical College, London, England. Reference (3).

"The various steps shown in figure [3 (a)-(d)] do not represent an historical sequence. They represent an attempt to break down the topological difference between Faraday's disc and an early type of commercial machine into simple basic steps. Figure [2] shows a cross section through the disc machine. In theory the two brushes marked (+) would be part of a continuous annular brush at the centre; likewise the (-) brush extends all around the periphery. This arrangement is represented diagrammatically in figure 3(a). The first step consists of elongating the disc axially so that it forms a cylinder. The magnetic circuit is then rearranged so that the flux enters the rotor through one end of the cylinder and emerges through the periphery, as shown in figure 3(b). If the rotor were of solid copper, the magnetic circuit through it would be poor. The rotor is therefore modified to consist of a hollow cylinder filled with iron, as shown in cross-section in figure 3(c). For ease of mounting the rotor, i.e. with a bearing at each end, the iron core is made integral with the conducting cylinder and the two rotate as one unit.

"The dimensions of the rotor are next changed to take advantage of the fact that the useful e.m.f. is generated along AB (figure 3(c)) rather than BC, i.e. between the brushes. The diameter is reduced and the length increased. The axial direction, however, now represents a bottleneck in the magnetic circuit, even though the machine can be flux fed from both ends, as shown in figure 3(d). The solution to this situation is to send the flux right

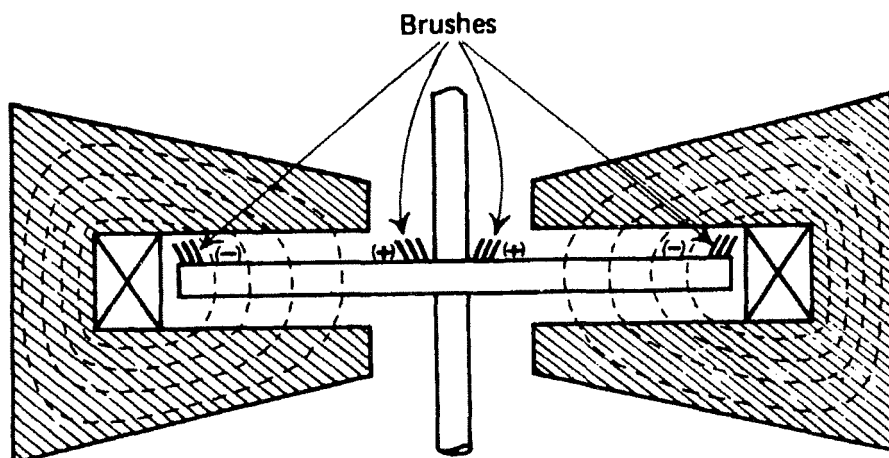


figure 2

Cross-section through a disc machine in the plane of its axis.

through the rotor, as shown in figure 3(e)."

In a manner so casual so as to escape attention Laithwaite alters the magnetic field direction from flux lines parallel to the axis of rotation to flux lines perpendicular to the rotational axis. This fundamental change and the unstated ambiguity: do flux lines rotated in the manner shown, figure 3(e) ipso facto demand a two piece machine, figure 3(f)? If the two piece, i.e. rotor-stator construction is implicit for electrical machines where the flux lines through the rotor are perpendicular to the axis of rotation, then what has this to do with the archetypal one-piece Faraday homopolar machine which *does not* require a stator. Is the evolution suggested by Laithwaite an evolution or the description of two fundamentally different families of electrical machines?

We continue with Laithwaite: "Notice that this means that two sets of brushes are now needed, since the polarity of the e.m.f. around one arc of 180 degrees is opposite that around the other. The plane of the magnetic circuit can now, with advantage, be turned through a right angle so that a cross-section of the machine is as shown in figure 3(f). This is the point where the rotor conductor is split into individual wires which can be connected in series. To do this it appears to be necessary to use a hollow iron core and to connect each wire at end X (figure 3(g)) to the next, at end Y, by means of a wire passing up the centre of the core.

In his dissertation Dr. Laithwaite has

made a number of assumptions, which, in the light of contemporary knowledge, can be questioned. I am not singling out Dr. Laithwaite as being defective in his reasoning, but his position of authority is representative of the presently accepted level of knowledge of electrical science.

The first assumption:

That there is a relationship between the Faraday disc and the two piece induction machine of commerce.

The second assumption:

That there is no difference in behavior of electrical machines if the source of flux moves with the rotor or not.

The third assumption:

That there is no difference in the behavior of electrical machines if the flux lines are either parallel or perpendicular to the axis of rotation of the machine.

The fourth assumption:

Flux cutting is the only mechanism for the generation of electricity from magnetism.

It is left to the reader to intellectually explore the implications of the first three assumptions on the evolution suggested in figures 3(a)-(g).

That the fourth assumption is suspect is ably illustrated by a second extract from Laithwaite.

"Figure [4(a)] shows that surface con-

figure 3 (a)-(d)
Basic topological steps from a disc machine to a
drum machine with wound rotor.

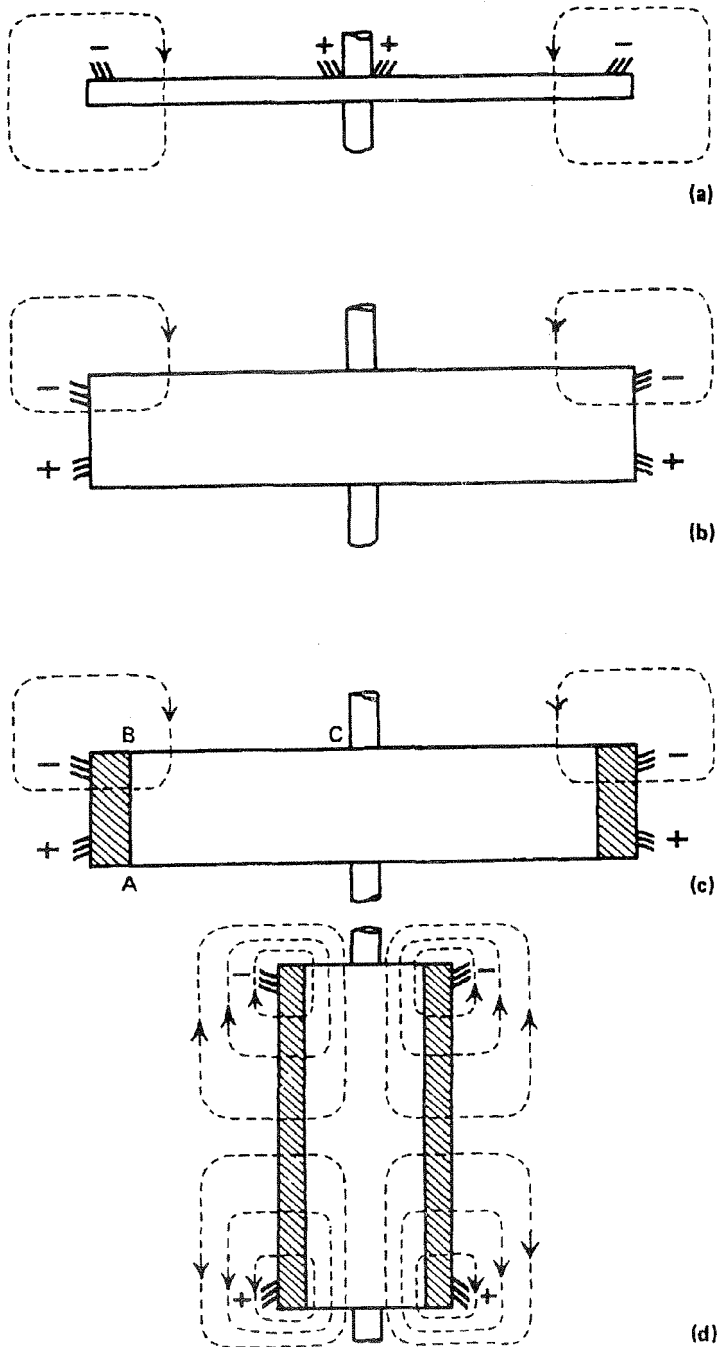


figure 3 (e)-(g)

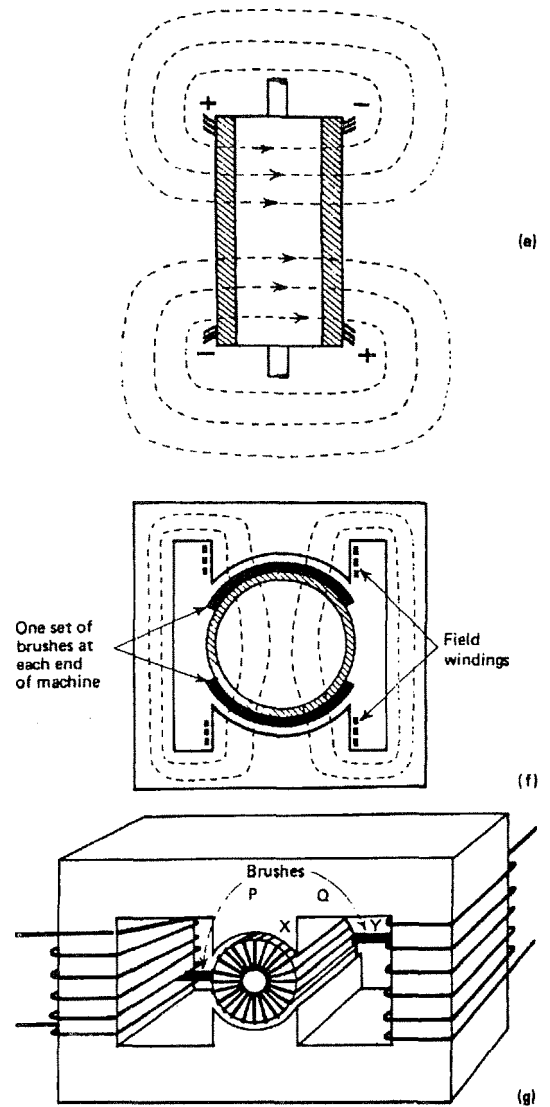
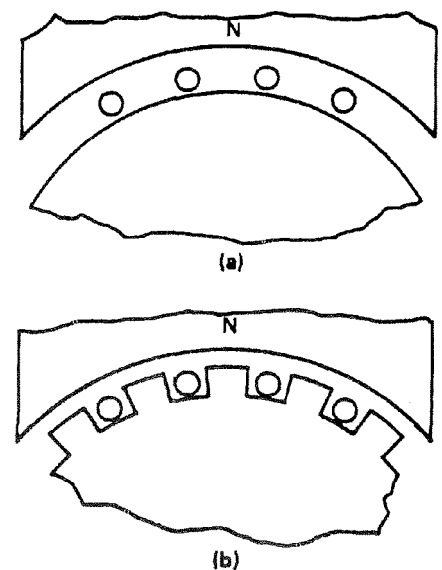


figure 4 (a)-(b)
Improvement in magnetic circuit
obtained by sinking rotor con-
ductors into slots.



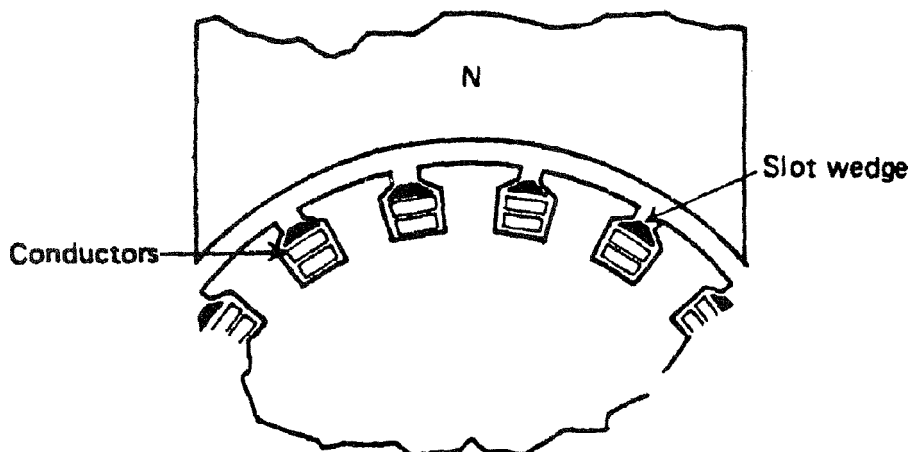


figure 5

Rotor conductor arrangement in a modern machine.

ductors demand a gap in the magnetic circuit which must increase with increase in thickness of conductors, which in turn is demanded by an increased current loading, whereas a conductor system in slots as in figure 4(b) can combine thick conductors and small airgap in one arrangement. Quite apart from magnetic considerations, conductors on the surface are liable to become displaced around the periphery, aided by the speed of rotation which tends to stretch and loosen the conductors. If the conductors are constrained in a slot, and held in by a non-metallic slot wedge as shown in figure [5], the speed of the machine, and therefore its output, can be increased without suffering these effects of rotation.

"The big question, however, is whether the machine will still function at all. After all, the magnetic flux will now take the line of least reluctance and cross the gap only opposite the rotor 'teeth'. The flux now cutting the conductors is now perhaps only 10% of that which cuts the conductors of a surface-wound motor. Will the output voltage therefore be only 10% also, as apparently dictated by the flux cutting rule? For a long time no one would try the slotted rotor, because they did not believe in the 'magic' of electromagnetism. They believed they knew all the answers. Worst of all, they did not realize that only *circuits* mattered and that so long as a machine broke and remade *linkages* between magnetic and electric circuits the answer would be the same whether the conductors were buried or not."

It is not all of us who conceal our ignorance by appeal to the belief in the "magic" of electromagnetism. The fact that the modern two piece wound rotor machine *works at all* speaks to the operation of electrical laws outside the computer-controlled algorithms now representative of electrical science.

The fifth assumption:

The fifth assumption is that all the laws of electrical science must be consistent with the energy conservation laws. Is this why the "magic" of electromagnetism is necessary?

To quote Laithwaite once more: "It is to be hoped that we are all not suffering from similar inhibitions when we design our modern machines."

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Bruce dePalma, Private Bag, Orere Point via Papakura, South Auckland, New Zealand. phone 64(9)2922-616

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THE NATURE OF *ETHER* & *ELECTRICITY*

by William F. Hamilton

IT MAY COME AS A "SHOCK" to realize that our very life depends on electricity. Not only does our body operate on changing electrical potentials, but the essential structure of the universe is based on fundamental electric charges, fields, and waves. Nature's electrical generators are most evident in piezoelectricity, static electricity, and atmospheric electricity. The sheer, raw power of electricity unleashes its fury daily in thousands of lightning bolts. The magnitude of the volts behind these bolts can reach a startling 100 million between the ground and the base of a thundercloud.¹

Science has accumulated a lot of facts about electricity in terms of electron generation, electron flow, electrical current, and voltage sources. The classical model of the atom depicts the electron as a suborbital vehicle or carrier of negative charge. The nuclear proton is arbitrarily assigned a positive charge. The opposite polarity charges are said to be equal in field strength. The Neutron lacks charge or is a composite particle (wavicle/vorticle) of balanced charges.

In physics or electrical engineering the source of all electrical effects is the electric charge. The magnitude of the force between two electric charges in vacuum is given by Coulomb's Law: the force is directly proportional to Q_1 and Q_2 which are the two values of charge measured in coulombs and inversely proportional to the area of permittivity of free space (equal to 8.854×10^{-12} farad/meter) times the square of the distance between center of the charges in meters. The direction of the force is along the line of the two charges. If the two charges are of the same polarity, the force repels the charges from each other. The fundamental mechanism behind this is not explained. It is just a statement of observation.²

The fundamental charged particle is the electron which has a charge of 1.60210×10^{-19} C and a mass of 9.10908×10^{-31} kilograms. A charge has a region of influence that is defined as a field. The field permeates the

space around a charge or is a special alteration of space itself. In classical physics, the electron has a radius of 10^{-13} cm. The negative charge was considered distributed around this minute sphere. Physicists then calculated that the negative charge on one part of the electron spheroid would repel the negative charge of another spherical section and cause the electron to explode. In quantum field theory, the electron is considered as a point-particle. Of course with a point-particle, the electrical potential reaches infinity at dead center. Another dilemma.

Other fields that permeate or alter space are gravitational and electromagnetic fields. The source of these fields resides in a mass or object that itself may be a fundamental field or alteration of space. A yet undetermined relationship exists between the electromagnetic and gravitational fields. The attempt to unify the forces into one theoretical construct is now referred to as a Grand Unified Theory. A more grandiose term is: Theory of Everything. This is, of course, the ultimate in human hubris.

The nature of electrical charge is a mystery. We make use of it everyday. But the common facts about electricity are not complete and anomalous electrical behaviors has been noted by several experimenters. These anomalies could lead us to an even better understanding concerning the nature of electricity.

In order to limit this discussion, I will cite a few anomalous electrical effects that produce contra-gravitational force.

Dr. Francis Nipher, once professor of physics at Washington University, St. Louis, Missouri performed a modification of the Cavendish experiment in 1916-17. Cavendish used a delicate torsion balance to determine the density of the earth. Nipher used a one-inch lead ball suspended with an untwisted silk thread approximately 180 cm. long and centered inside a 5-inch-square box or Faraday Shield. A horizontal slit in the box's side permitted Dr. Nipher to observe deflections. He placed an insulated 10-inch-diameter lead sphere next to the iron

box. A copper wire connected the large sphere to the metal box to keep them at the same potential. The large sphere was mounted on a hard rubber plate. When the large sphere was electrified using a high-voltage influence generator, the normal gravitational attraction of the two spheres was reversed and the small suspended sphere was repelled from the larger by about twice the deflection caused by gravity. Reversing polarity did not alter the effect. When substituting low-voltage AC in place of the H-V influence generator, a repulsion effect was still observed, but one of smaller value.³

Mr. George S. Piggot conducted even more amazing experiments in 1904 using a powerful electrostatic generator. He made use of an apparatus that had a rotating spherical electrode mounted on a stand. He was able to suspend, against gravity, small metal balls by means of a strong electric field. Extending for about .5 cm. around the perimeter of the objects was a mysterious dark band. He also succeeded in suspending nonmetallic objects such as cork and wood. These objects would oscillate up and down around the center of the field. An improved Wimshurst generator supplied the spherical electrode with approximately 500,000 volts of potential.

Townsend Brown's experiments with suspended charged capacitors also demonstrated a contra-gravity effect. When the capacitor was charged, it exhibited a forward thrust towards the positive pole. When the capacitor was mounted vertically on a beam balance, the positive-pole vectored thrust exhibited a lifting effect counter to gravity. This did not involve the expulsion of charged particles to produce thrust as in an ion rocket. Brown felt he discovered a principle of electro-gravitation.

If positive and negative charges are equipotential, then what would cause an unbalanced force between charges? If we lived in a sea of predominantly negative charge, then the action of positive attraction and negative repulsion would work mutually to produce a thrust vector in the direc-

tion of the positive pole. That would constitute a testable hypothesis.

John Searl is said to have employed an unique method of defying gravity using a continuous rotation of cylindrical magnets around a magnetic annulus. A very high electrostatic charge is said to develop between the rollers and the ring producing the Searl levity effect. His generator supposedly levitated of its own accord and generated a pink corona, however, this story has never been verified, or the effect reproduced. However, the Searl disk is claimed to have had a very high potential difference between the center section and rim of the disk, an effect actually noted in the de Palma N Machine. I the Biefeld-Brown effect, as discovered by Townsend Brown, incorporated within the operating principles of these rotating devices. Can a powerful electrostatic field produce an artificial gravitational field or modify the ambient gravity field?

It is said that the Austrian "Water Wizard" Victor Schauberger built a flying saucer during World War II for the Germans. Schauberger's device rotated fluids in a hyperbolic vortex that generated high electrical potentials and a consequent levity effect.

The claimed results of these experiments should cause us to ponder and reconsider the current theoretical dogma regarding the laws of electricity and the nature of electrical charge. This should lead us into further physical experimentation to discover the truth of the matter.

The problem of the nature of electrical charge is tied to the problem of space. Einstein considered the concept of field when thinking of problems in electrodynamics. He rejected the idea of the existence of a form of matter called "aether" especially because it re-invoked the idea of an absolute frame of reference. On the basis of the general theory of relativity, space as opposed to what fills space, which is dependent on coordinates, has no separate existence. Space, in the general theory, is not space without a field, but a special case of the gravitational field. Thus, Einstein concludes, there is no such thing as an empty space, i.e. a space without field. In his attempts at a Unified Field Theory, Einstein attempted to reconcile the gravitational field and the electromagnetic field. Einstein conceived space as part of a higher dimension which causes space to warp and bend in the presence of mass. However, this invests space with the properties of a solid. A solid can warp, bend, and convey waves.⁵

In quantum field theory, the electron was reduced to a zero-radius point-particle. This raised the problem of infinite energy. This problem was handled through the mathematical technique of re-normalization. To circumvent the problems found in quantum field theory, string theory has been introduced. In string theory, particles like the electron are one-dimensional strings, perhaps joined in closed loops, with different modes of vibration. Again, higher dimension spaces are invoked to maintain a mathematical consistency with experiment.

There are scientists who find these exotic physical theories wanting, and the lack of mechanical models a hindrance to a real understanding of particle physics.

One thing that hints that our mathematical-only models of space, particles, and charge are wrong are certain experiments in particle physics. Dr. Alan D. Krisch performed proton-proton collision experiments using the Zero Gradient Synchrotron at Argonne National Laboratories and found that when two protons spin in the same sense and collide, they scatter as expected. When the two protons spin in an antiparallel sense, they do not deflect, regardless of mutual like charges, but *appear to pass through each other like ghosts!* These protons are behaving like vortex rings in a fluid medium. Antiparallel vortices will not repel, but attract each other. Charge polarity seems to arbitrarily depend on spin sense and mutual interaction.

New ether theories have been proposed to account for the existing experimental phenomena and produce visualizable models. These theories should also predict new phenomena that, when subjected to experiment, should be in agreement with prediction. These theories postulate that space is permeated with a fluid medium of energy or that space itself is composed of a fluid. Its almost as if the universe itself were a giant liquid drop of undifferentiated fluid that differentiated by virtue of its internal dynamics.

William M. Honig of the Western Australian Institute of Technology has proposed a Grand Unified Theory based on a physical model for vacuum space consisting of the superposition of oppositely charged continuous fluids. Models for the photon, electron, neutrino, and proton consist of unique variations in the relative densities of the fluids and their flow patterns.

Eric J. Lerner in his recent book, **The Big Bang Never Happened**, points to the Krisch experiments and his own calcula-

tions to state that particles formed from vortices in some fluid is certainly worth investigating.

The Indian nuclear engineer, Paramahansa Tewari, has developed a complete theory of space vortices based on a substantial space medium possessing non-material properties. The electron, in Tewari's model, is a spherical vortex with a void core. The flow of the medium in a circulating motion at velocity c produces the energy we call charge. An electron will have a clockwise vortex (negative charge) and a positron an anti-clockwise vortex (positive charge).

In my own theorizing I believe the electron is producing an outwardly-directed pressure gradient on the surrounding space medium due to its vortex rotation. This pressure gradient is identical to the electrostatic field. According to the Law of Continuity for a moving stream of fluid, the density times the cross sectional area of the flow times the velocity must always be constant. Therefore, if the static pressure of the space medium is equivalent to gravitation, and the dynamic pressure is equivalent to electric field, then as the dynamic pressure increases, the static pressure decreases, always maintaining a constant. This establishes an inverse relationship between gravitation and electricity. If there is pressure along one axis, then there is tension along the orthogonal axis. These lines of tension could be equivalent to a magnetic field.

Some of the ideas expressed here are only rudimentary and introductory and are designed to stimulate further thinking with regards to unexplained physical phenomena. Why do Brown's capacitors exhibit thrust? How does a high-voltage field cause levitation? Can we tap the dynamic energy flows of space? When we start to consider these questions perhaps we will move closer to a greater understanding of the nature of electricity and the ether of space.

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CATTLE MUTILATIONS IN WEBSTER COUNTY, MISSOURI

by Eugenia Macer-Story

Since the reader might wonder why a reporter from New York is now writing an article about unexplained cattle mutilations in a rural area of Missouri, I should explain that I had traveled down into the Webster county area in 1990 while visiting Missouri to do an article on the Skyrim seances near Columbia, Missouri. The Skyrim article was published in the *Journal of Borderland Research* in February 1992.

My route in 1990 took me by air to Springfield, Missouri where I was met at the airport by Elaine Potter. I then visited Elaine's home and interviewed her about her recent UFO experience. This strange tale was published in the March-April 1991 issue of *Body Mind Spirit*.

After the interview, Elaine drove me out to Drury near Springfield where I read through case histories on UFO contact which had been collected by George Andrews, who is a member of the Skyrim group.

Another member of the Skyrim group then arrived and after a four hour drive delivered me to the farm near Columbia, Missouri for the seance activities. I returned to Drury briefly after the meeting to finish reading the case histories.

"Animal touch" therapist Sue Bailey then picked me up at this rural location and drove me to the Springfield airport. Sue has an interest in transpersonal topics and was introduced to me by Elaine Potter shortly after I had interviewed her.

It was Sue Bailey who sent me the News-Leader article on cattle mutilations which had occurred in the rural area of Webster county west of Springfield in February and March of 1992. George Andrews had returned to France in September of 1991, and was not available to collect information on these events.

When I asked Sue if there was any initial news broadcast about the mutilations, she located the tape of this broadcast at KY3 Action News and sent it to me. So, though far from Springfield, I have witnessed a live interview with Northfield, Missouri farmer Jim Bouldin about his mutilated cow.

This is a solid interview by reporter Dennis Graves which asks a few leading questions and shows close-ups of the unexplained wounds to Bouldin's black Angus cow. Teats

were removed from this cow, the throat was cut and the windpipe removed. All of the blood had been drained from the carcass. There was less than one quart of blood left in the cow and no trace of blood on the ground nearby.

Deputy Robert Andoretta states on tape that no evidence of human presence was found near the carcass of the animal. According to Chris Bentley's writeup in the Springfield News-Leader, predators would not approach the bodies of mutilated cows found on the farm of Phillip and Edwina Ragsdale in February 1992, east of Marshfield in the Webster county area. In total, eleven cows were reported mutilated in this same area during February and March 1992.

Jim Bouldin speculates during the taped interview that the killings might be due to "devil worship" since another cow was found dead about a half mile down the road on the same night of March 10, 1992.

March 10 was not the new or full moon. But it was the first Tuesday in Lent. However, since other mutilations had preceded the Bouldin event during February it is hard to find any overt "Satanic" significance in the date of March 10.

As Mr. Bouldin states in the news interview, there seems to be no conventional explanation for the odd death of his cow. The inquiring mind then turns toward other possibilities: UFOs and/or the supernatural. A commentator on the KY3 news broadcast tape states that in previous years dead livestock has been found in the rural area near Springfield showing broken bones as if dropped from an aerial vehicle. One bull's horns were found driven into the ground and a cow was found impaled on a fence post as if the body had been dropped from above.

According to the KY3 news tape and the News-Leader article, people have been seeing strange lights in the sky near Northview and in other locations near Springfield since late 1991.

In the early Spring of 1991, I came home from an evening meeting to find a message from Drury author George Andrews on my answering tape. He had spent the evening watching aerial lights hover not far from his barn and had been urgently trying to reach me. So when I read in the news that people in

the area were seeing strange lights in 1991 I do know this to be true in at least one instance. I do also know from my previous interview with Elaine Potter that local residents have been seeing UFO lights off-and-on in this area of Missouri for the past twenty years. She and her family had experienced an odd encounter with the UFO phenomenon more than a decade previous to her recent encounter.

However, to be rigorous about this report, nobody in Missouri has ever reported seeing a light descend and mutilate a cow. It is reasonable to suppose that if cattle are dropped from above in some mysterious way and unexplained lights are also seen aloft in the same area there may be a connection between those two odd aerial events.

But is this connection actually in the realm of the supernatural and/or interplanetary contact with earth or does this involve perverse activities by technically-gifted human beings?

This central dilemma is explored in my book *Dr. Fu Man Chu Meets The Lonesome Cowboy: Sorcery and the UFO Experience* which has recently been made available by IGOS press. I find it fascinating that I should have stressed the UFO-cattle demon link at both the beginning and the end of this volume and that only a few weeks after it was accepted by IGOS for distribution I should have unexpectedly gotten word of the cattle mutilations in Missouri.

This interesting coincidence tends to support my view that whatever is "behind" the UFO-cattle mutilation link is definitely playing mind games which go far beyond simple tissue sample experimentation. In confronting and analyzing such mind games it is helpful to have considered various traditions of sorcery, religion and folk beliefs about the "supernatural."

After all: the "supernatural" is simply our catchall word for the observed action of other dimensionalities which are imperfectly grasped by the conscious attention. Mysteries exist which continue to elude conventional scientific analysis.

According to the Springfield News-Leader article, a tissue sample from the wounds of Bouldin's cow was sent to Dr. Robert Altshuler, a pathologist in Colorado who is affiliated with MUFON. This technician reported it to con-

tain unusual carbon presence as well as an unusual cell polarity.

Cuts such as were found on Boudlin's cow could be accomplished by a high heat surgical instrument such as a laser. But whose laser? In the light of recent claims made about the alleged hyper-technology of Area 51 in Nevada, an arcane answer might be made to this central question: "Robert's Lazar?"

The controversial Robert Lazar claims that there is a secret, UFO-linked government project which does utilize very sophisticated technology not available to persons outside the "black world" of clandestine research.

A tape made in the early days of the Billy Meier/Pleiedes tangle shows inventor Marcel Vogel (now deceased) stating that the Meier "metal samples" from alleged UFO craft do have an unusual molecular configuration. But this molecular analysis is old news.

Perhaps we should step free of conventional technical analysis and look at the larger picture. Somebody is playing mind games. Who is engineering this strange and sometimes bloody melodrama?

Are random cows being oddly mutilated by "gods" or by behavior modification experts from the "black world" of clandestine scientific research? The unusual condition of the dead cow found March 10, 1991 on Jim Boudlin's farm in Webster county Missouri cannot be conventionally explained. The genuine perplexity of the situation can be clearly seen during the interviews made by the local television station.

Perhaps UFO analysts who leap toward "government conspiracy" theories sometimes forget how strange these genuine instances of cattle mutilation really appear to the farmer who finds a dead animal drained of blood in his pasture. The phenomenon is a real mystery and it cannot be easily dismissed by claiming that the same "government project" or "cult" is behind each instance.

A farmer who lives in a haunted house near the site of the cattle mutilations which occurred in February and March of 1992 has experienced a unique mixture of events which pushes the "UFO" issue into the area of the supernatural — and then pushes it right back out of the category of "supernatural" into "paratechnical."

It is hard to "judge" this particular situation. For starters: I simply present a basic narration from the telephone interview I conducted with this farmer in June of 1992. He has asked that his name and exact location not be given in this article.

Do you have any experience with the super-

natural?

"We live in a house built on a cemetery. When we moved in there were spirit bags hanging on the walls (to ward off the ghosts) and piles of bones in the basement. This old cemetery can be found on maps of the area dating from 1830. When I moved into the house in 1980 I was not completely prepared for what I was about to experience — though the realtor had jokingly warned me about the place.

Presences are seen in the hallway. Odd "banging" sounds appear on recording tapes made inside the house. Unusual shafts of light have appeared on photos taken in the basement and red stains have also appeared on the walls in photos taken in this same location.

Four miles from our house is a landmark called the "Devil's Den" which is a waterhole so deep it has never been completely sounded. People say it is about a mile and a half deep. About 125 years ago there used to be a recreation wharf at the waterhole. Dances were held there but they closed it due to a whirlpool which would come up at unpredictable intervals and made swimming and boating dangerous.

What do you think about the recent cattle mutilations?

"The last mutilation that occurred around here was about 400 yards from our house. It looked as if it was done with a butcher knife. The cuts did not look like laser cuts. One of our calves also turned up with the tail missing. This was not a predator. The tail was cut off too high and close to the end of the spine to be the work of an animal. Beside one of the mutilated cows found near here was a piece of nylon the size of a musketball. It was semi-sticky and laying beside the cow.

What about the UFO sightings around your area?

"Ufos are not seen near the mutilations. These are not done by extraterrestrials. It is a form of "hazing", a "gaslight treatment" to throw people off the track. They never take the same body parts from any one cow: a heart from one, an udder from another, a tail from another, and so on. Why would an advanced intelligence do this? It looks like somebody playing "FrankenCow" to create a diversion.

I have seen UFO lights up close, about a hundred yards from me. They looked like a triangle with the corners cut off and bent from the center downward, like cutting a triangle out of a hubcap. They can go from the visible to the invisible. People have been seeing them in this area since about 1983. The lights bob

in a zig zag pattern. While they are in the area, a compass won't read outside and there is a sense of "ozone." The ozone changes the growth of algae near the house. You can hear music inside several different rooms when the lights are present. Outside the house, they cause 15-20 negative volts of electricity.

Also there are strange "heavy equipment" sounds from across the river. I heard that something called the "Center of the Earth League" had bought that piece of land. Coyotes howl in the daytime if a stranger tries to approach that area. It is unusual to hear coyotes howl in daylight.

Did you ever see "beings"?

Inside my house. Sometimes I am paralyzed. I can't move. I fear death. When this happens I see people moving around me with suits on. My ears ring when this happens.

Describe the "beings."

They are people. Once I came out of the paralysis and was trying to move. One said: "I told you he was getting too used to it. Let's get the hell out of here." They look like normal people with suits on.

Sometimes we hear a vehicle go around the house but we can't see anything. It leaves tracks and it would run over you if you stood in front of it.

I think it is some sort of government activity. I call it "The Men From Them." A fellow who lived near this area claimed that he helped to develop this technology when he was with the Army Corps of Engineers in Little Rock.

Once some game wardens chased an invisible vehicle for more than a mile upstream. This was after dark and they could see sparks as the vehicle hit rocks in the road. It had a pumping sound as if it was using a generator-driven power supply."

This is a sincere interview. The man believes his statements. But what is going on here? Is this a government or private project on invisibility? Or is it an encounter with the supernatural — somewhat like the phantom rickshaw legend which turns up in various cultural contexts as a disappearing vehicle such as a coach, helicopter or truck?

OR is it an interdimensional, possibly extraterrestrial, presence which is manifesting effects which are difficult to describe in any conventional way?

As early as 1946, the Army Corps of Engineers had investigated the "Hornet Light" near Joplin, Missouri. According to John Thomas Richards, a resident of Rolla, Missouri who teaches literature classes at Fort Leonard Wood, it is common knowledge in the area

that the Army has researched this oft-seen aerial phenomenon. He reports that their equipment is said to have registered odd electrical peaks at the time the light was observed.

Reports of the Hornet Light are not especially pleasant. It scares people on lonely roads and once attached itself to the rear window of a school bus, terrifying the passengers. Possibly the Hornet Light (named for a small town in the Joplin area) was scaring people long before there were paved roads in the area.

Leaving no stone unturned, this investigator paid attention to a psilocybin mushroom vision transcribed by author George Andrews (mentioned as the UFO light witness in part one of this article) for UFO researcher Forrest Crawford. In this vision, during which Andrews ate the mushroom, went into trance and spoke into a tape recorder, it is related that the function Andrews served while in the Springfield, Missouri area was to "awaken the amalgam" within the Cahokia mound.

The Cahokia mound is an ancient "mound builders" site near St. Louis and has been the subject of much speculation by archeologists and "Atlantis" theorists. It is interesting that Andrews, who has recently been almost obsessed with government conspiracy theories, did NOT focus on his conscious preoccupations while in trance. Instead, he began to refer to ancient spirit presences which inhabit the Missouri area. One wonders what "awaken the amalgam" might actually mean within the four-dimensional continuum. Literally, an "amalgam" is an alloy of mercury sometimes found naturally in the form of silver-mercury crystals.

Since the west central area of Missouri is known to be unusual geologically, one begins

to wonder just HOW unusual it might actually be in terms of gravitational anomaly. In several places near the site of UFO manifestations in Missouri the earth's crust has contorted, pushing layers of rock up from lower strata. The famous "New Madrid" earthquake fault area is just north of this previous terrestrial upheaval.

As I composed the second part of this two part article, I was aware of the presence of "something" evil. Or, if the reader does not acknowledge absolute "evil", this can be described as a mental energy which is quite severe. It dogged me. As I got together my notes, I was on several occasions mentally frozen by thoughts of hostility toward other UFO investigators concerned with the Missouri phenomenon. I had to overcome these episodes of irrational anger in order to finish the article in a reasonable way.

This experience is unique in my investigation of the UFO phenomenon. Perhaps I am getting close to an "answer" or to sensitive data of some sort. Or perhaps an innate emotional "survival" mechanism is trying to warn me that the Missouri situation might literally be hazardous in a way which I have not previously experienced first hand.

I have been reporting on witnesses to UFOs since 1975 and have had several hair-raising encounters with inexplicable energy sources while visiting sites where UFO manifestations are often seen by residents. One of these encounters (with an aerial "fog") took place near an Army base in Eastern Pennsylvania and is detailed in my recent book on *Sorcery and the UFO Phenomenon*. But I was not prepared to have the "UFO cattle demons" of Webster County, Missouri play visionary games with my mind as I was attempting to write up a brief report on them at a safe distance North of that.....????

This type of experience was not on my agenda. However, to be honest in probing the reality of these phenomena, I must report that I DID encounter unusual resistance from within my own psyche. Perhaps this was telepathically induced somehow OR perhaps my own subconscious was contacting my conscious mind with the news: "Caution, Danger."

I experienced physical vertigo several times while intending to read material associated with the Missouri investigations. On one occasion I woke in the early hours of the morning with the visionary impression that a grey being was smiling (Yes: it had teeth!) at me with evil intent. I refused to acknowledge this grin, and the apparition disappeared. The next morning my vertigo was so severe that I was unable to stand up when I attempted to get out of bed.

I told myself that this was simply an esoteric version of the Asian flu and managed to creep toward the coffee pot and pump myself full of Spanish coffee. As any bruja knows, even extraterrestrial flu cannot withstand this herbal mixture and I recovered!

I am not convinced that the psychic attack I experienced was extraterrestrial, but I did manifest unusually dark thoughts in context of the Missouri cattle mutilations/UFO lights material. This did not drive me away from the situation. It simply caused me to pay attention to visionary and impressionistic material rendered by witnesses from the Missouri area.

EUGENIA MACER-STORY can be contacted at: Box 741—JAF Building, New York, N.Y. U.S.A. 10116. Her book DR. FU MAN CHU MEETS THE LONESOME COWBOY: *Sorcery & the UFO Experience* is available from: IGOS Publications, 255 N. El Cielo Road Suite 565, Palm Springs, California, 92262. \$22.95.

In May 1990 the German "Internationaler Arbeitskreis fuer Geobiologie e.V." held its first congress in Andernach. The following is an extract from a report by the Chairman of their Working Party on Geobiology and Building Ecology, Hofrat Prof Dr Emil Worsch. (Translation Ilse Pope, 12.7.90)

"Regarding the geobiological connection between earth radiation and chronic disease, in particular cancer, it could be shown, as already reported two years ago, but now with even greater precision, that at least the starting cause of these diseases is very closely connected with the radiation complex habitually found in cancer zones and at cancer points. Here it was found again and again that the so-called double Curry zones, in connection with radiation from water, but sometimes also without this, were the main cause. Of approximately 600 cancer cases which I investigated, there were less than 5% which had no connection with the radiation situation outlined above. In my book which is to be published in the autumn of this year there will be a rich choice of case histories in the form of radiation sketches, and I shall also report in detail on the mystery of 'geomancy'."

The 1993 Extraordinary Science Conference

A Good Time Was Had By All

by Peter A. Lindemann

The 1993 Extraordinary Science Conference was held July 22 through July 25 in Colorado Springs, Colorado at the Sheraton Hotel South by the International Tesla Society (P.O. Box 5636, Colorado Springs, Colorado, 80931). It was attended by about 200 people.

The logistics of the conference were all first class. The Sheraton is a beautiful setting and the facilities were excellent. The majority of events were conveniently located on the ground floor, and only the Hospitality Suite was upstairs for late night carousing. Registration ran smoothly, events were relatively on-time, and everyone I spoke with had enjoyed the conference.

Steve Elswick must be commended for a huge job well done. Not only were all the essentials in place, but many extra touches were added that really made the event enjoyable. One nice touch was during each morning's first talk. In the back of the large conference hall was a spread of "toroidal carbohydrate units", a reference to donuts by Master of Ceremonies Michael Riversong, as well as coffee, decaf, tea and juice. Also, the "Wine and Cheese Socials" each night were an endless offering of fruit, nuts, vegetables, dips, cheese, crackers and an assortment of wines, beer and soda, held in a beautiful, indoor, garden-patio setting. The Tesla Society Bookstore was also conveniently located, nicely laid out and well stocked. Overall, the attention to detail was totally first class.

As usual at these conferences, there were a few last minute changes in the speakers schedule. They were minor, however, and none of them changed the topic that was to be discussed at that time. One big plus was that Gaston Naessens showed up and gave a presentation personally, replacing a speech that was to have been given by one of his staff.

The biggest disappointment was the last minute cancellation of Dr. Yull Brown, who allegedly had to deal with the US Customs hassles accompanying the untimely arrival of a shipment of equipment from overseas. All of the other scheduled speakers spoke in their respective time slots.

My main interest in attending this conference was to get the latest information on energy technologies and this included over half the presentations. Overall, I definitely learned some new things, but the conference speakers were consistently plagued by equipment that was damaged in transit. But let me begin at the

beginning.

The first talk on Saturday morning was to have been by Dr. Yull Brown on his Brown's Gas Technology. For those who don't know, Brown's Gas is a stable mixture of 66% Hydrogen and 33% Oxygen, created by a special electrolysis technique. In his place, Dr. Hans Peterman gave a rambling talk without notes punctuated by clips from a video of Dr. Brown in his laboratory. The video sequences were very interesting. Various sections of this video showed Dr. Brown welding aluminum to steel, vaporizing titanium, cutting through a fire brick while holding the it in his unprotected hand, and many other feats that are otherwise impossible without the miracle of welding with Brown's gas. At one point, after vaporizing some titanium, an event that occurs at over 3000 degrees Celsius, Dr. Brown showed that the welding flame does not broadcast heat by grabbing the tip of the welding torch and holding it with his bare hand for over ten seconds, less than 1/2 inch from the flame. For anyone familiar with conventional gas welding, this was astounding to say the least. The last part of this time period was used by Dan Haley who gave an eyewitness account of a demonstration of using Brown's Gas to disintegrate radioactive materials. He claimed to have been present when a demonstration was given to some California EPA representatives using Brown's Gas incineration to destroy 96% of the radiation in a sample material. These government representatives also determined that the immediate surroundings remained uncontaminated by radiation. Of course, three weeks later, these same EPA reps were denying that it happened.

The next presentation was also on Brown's Gas technology given by BSRF member Gary Hawkins. Gary brought a Brown's Gas Generator that he built to demonstrate the effects of the flame, but his high current power supply was damaged during his flight to the conference. So again, no demo. But Gary did bring a video showing the effects of Brown's gas when it is ignited. In an elegantly conceived experiment, Gary conclusively showed that Brown's Gas, when ignited, first explodes, about doubling in volume, and then rapidly implodes, collapsing to less than 5% of its original volume. The video showed the experiment run repeatedly and in slow motion. Gary also showed that when Brown's Gas is contaminated with air, it reverts to an unstable and highly explosive mixture. Although Gary has

successfully made Brown's Gas, he cautions that the process is always potentially dangerous. In spite of the hazards, Brown's Gas Technology is here, it works, and it should be developed. Gary has plans on how to build your own Brown's Gas generator, they are \$50pp from Horizon Technology, 2442 NW Market St #274A, Seattle, Washington, 98107

Next was George Wiseman talking about his Advanced Energy Conserver. George demonstrated some simple circuits using a battery, a little water pump, and a large capacitor. He showed that useful work could be performed by the water pump as the battery was used to charge the capacitor. He then showed that an equal amount of work could be obtained again by discharging the capacitor through the pump with the battery out of the circuit. He claimed that this was a simple way of getting at least twice as much work out of a battery. His hypothesis was that energy is not consumed at the load, but only when it returns to the source. Unfortunately, the demonstration was not metered in any way. Therefore, his theory, while looking interesting on the surface, was left unproven.

After lunch, Barbara Hickox gave a presentation about the so-called "Fossil-Free Electric Dynamo", developed by her late uncle. The device, of course, was not in operating condition, but looked like a variation of a variable reluctance machine. I was not able to attend this talk, but everyone I spoke to about it said that the talk seemed clear enough, but that Barbara seemed unable to communicate anything meaningful during the question and answer period. People came away confused.

Bert Werjefelt gave a talk on what he called a magnetic battery. I was unable to attend this talk, and no one I spoke with saw it either. I have no idea what we missed.

Scott McKie gave a talk about his PODMOD energy system. The system is the product of over 14 years work with resonant tank circuits. He claimed that Tesla's experiments with mechanical resonance had inspired him. He told the audience that his PODMOD unit consisted of two tank circuits that shuttled a charge back and forth in a figure eight motion, regenerating themselves using reactive power in harmonic resonance, but capable of delivering real kilowatt hours to an external load. He showed a bench model of the device that he claimed had worked prior to its being refitted into a box that was the beginning of a rack mounted module. Due to other business

priorities, he was unable to finish the rebuilt and demonstrate the unit. He said that his PODMOD unit could be started from a battery, then disconnected. After that, it would deliver 5000 watts of power on a continuous basis. The unit could be built for about \$500 worth of parts. I had a number of conversations with Scott. He seemed sincere, knowledgeable, sane (a big plus), and approachable. Although he said he would not sell units to individuals who buy their electricity from the grid, he was trying to get Utilities to use PODMODs in place of new generating capacity. He also said he would make plans and parts lists available to individuals who wanted to build their own unit. No one I spoke with had ever seen a unit in operation, and there was near universal skepticism that such a system could work.

Next came Joe Newman. Joe was given two hours. During that time he gave two demonstrations. To my knowledge, his equipment worked the way it was supposed to. The first demonstration showed a Newman motor driving a pump that was pumping water. The water was raised about 3 feet from the bottom of a plastic garbage can that sat on the stage in front of the table that supported his motor and pump. The pump then ejected the water out through a nozzle back into the garbage can. A pressure meter on the hose indicated that the water was being forced through the nozzle at 10 PSI. The motor pumped water under these circumstances for 30 minutes. Voltage readings were taken before the demonstration on only one battery that was part of a 2000 volt battery bank. After the 30 minute demonstration, the voltage reading on that battery was slightly higher than before the demonstration started. My estimate is that the motor performed at least 2000 foot pounds of work during the 30 minutes. Unfortunately, the test procedure was not instrumented well enough to determine if we were looking at "free energy" or not. No one I spoke with afterward was convinced either. Still, it was enough for me to change my mind about Newman's technology. I now believe he may have something, but it is still unproved to me. One thing that has not changed is Joe Newman himself. He was defensive, combative and condescending to the audience. He clearly remains a public relations disaster for his own work. Joe's second demonstration was quite novel. A large mylar balloon filled with helium was wrapped with many turns of fine copper wire. The balloon was ballasted so that it was nearly weightless, but resting on the ground. Current was applied to the wire and the balloon rose. Joe explained that the balloon lifted off the ground because a large distributed magnetic field around the balloon was floating on the earth's magnetic field. No one believed it. Everyone I spoke with

thought that the current in the wire warmed the balloon slightly, changing the buoyancy point, causing lift-off for conventional reasons. There was no way to determine who was right. One thing I did notice is that just before lift-off, the balloon did turn and orient itself like a compass needle would. At one point, however, the wires came off the power supply, but the balloon showed no immediate tendency to drop. This seemed to strengthen the skeptics explanation of lift caused by heating, which would have a residual effect. Joe's demonstrations worked perfectly, but no one believed his explanations.

Sunday morning started with a talk and demonstration by Owen Barker about his invention called the "Solar Harness." Owen claimed and demonstrated some nearly unbelievable things. Unfortunately, he too was not able to demonstrate the ultimate expression of his work because his device was damaged en route to the conference. If Owen is right, however, he has made a major breakthrough in solar energy. Here is what he claims to have discovered. If photovoltaic cells are stacked together, separated by wafer thin spacers made of magnetic material, and this stack is placed in a glass vessel that is either pressurized or evacuated with different gases, the current output of the solar cell stack can be multiplied by as much as 10 times. The unit he brought had been evacuated with a low pressure xenon gas atmosphere, but the glass nipple at the sealing point broke off during transit. Still, he was able to demonstrate that sunlight focused on the EDGE of this stack of solar cells, a cube of material about 4" x 4" x 4", was able to produce the same amount of electricity as if the cells were all directly facing the sun. I have no explanation for what appeared to be a highly irregular occurrence. He claimed that a solar tracking dish the size of a satellite dish in the backyard could easily power a home using his system when it is perfected. In spite of the problems with his equipment, Owen did demonstrate remarkable ingenuity and originality. I wish him luck in his future research.

That was the end of the exotic technologies. Next, Chris Riggio talked about his "Green Plug". Chris is a talented circuit designer and has come up with a "smart" circuit controller. By monitoring the current requirements of inductive loads, like a refrigerator compressor motor for instance, the Green Plug lowers the line voltage to the load it operates to the most efficient power point. The result is that motors start gently, refrigerators and air-conditioners run more quietly and with up to 25% energy savings. UL approved, Green Plugs are starting to sell like hotcakes, and even some Utilities are recommending them to their customers. At only \$35, Green Plug is only half the cost of the "Energy Buster" unit in the Real Goods Cata-

log. Watch for Green Plugs to show up at Wal-Mart and K-Mart soon.

Last, but not least was Joe LaStella. Joe is bucking the current in battery technology and is currently retrofitting cars and trucks with an electric vehicle drive system capable of delivering 450 miles per charge. He won't discuss the chemical composition of the batteries he is using, but certainly this is feasible with some of the exotic batteries developed in the last 20 years. Go for it Joe!

In closing, I would also like to thank Klark Kent for offering me room next to his booth space to demonstrate the prototype unit of the new MWO. Because of Klark's talk on the MWO, there was a lot of interest at the booth and quite a few people got to experience the new unit in operation. Thanks again, Klark.

My only complaint about the conference is that I didn't get nearly enough sleep because of the excellent, early morning presentations and the interesting, late night conversations.

Steve Elswick and his team of helpers put out a first class effort. He gave a platform to a lot of new speakers with new ideas, and gave some familiar speakers another opportunity to make their case. Steve also, very graciously, let me into the conference at the very last minute on a Press Pass. Thanks Steve. It was a great conference! Keep up the good work.

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LETTERS

96 YEARS YOUNG!

In enjoy your magazine very much. My husband (deceased) and I knew and liked Judy & Riley Crabb and I have been a member for 30 plus years.

Keep up the good work. We desperately need TRUTH.

Best wishes,
Genevieve Rivers
Fallbrook, California

GREAT!

The magazine is going onward & upward — Great!

All good wishes.
Larry J. Weisenburger
Los Angeles, California

RADIONICS VS. PSYCHOTRONICS

I received the Second Quarter Issue today, and as usual I'm finding a lot of interesting information and opinions.

I found the letters disputing the "psychotronics" versus "radionics" question very interesting. I am only beginning to learn about radionics (I sent away for the Copen catalog), and this kind of debate gives me some idea of basic issues and specific applications.

I am enclosing a money order to renew my regular membership. Keep up the good work. I particularly hope

to see further reports of your journeys to Ancient America.

Sincerely,
Donald J. Kelly
Oak Lawn, Illinois

SCI-FI FUTURE

I noticed that people have been asking for someone to put the old Stirling Heat engine to practical use. Well, it was done about 15 or 20 years, or perhaps, more ago by General Electric (I think that is correct—memory is going). There was an article in either Popular Mechanics or Popular Science about it. As I seem to remember it was a 3000 watt generating plant and was built on a metal skid. It was to be dropped by parachute to the troops on the ground. The article was short, but there was a picture showing the finished unit. Perhaps letters to the two magazines will bring out more data about this. And, incidentally, I don't know if these units ever saw service anywhere or even if any were delivered by GE, but I am certain of the article appearing in the magazine.

Also, in one of the same magazines mentioned above, there was an article about the invention of a car heating and cooling system that was based on the Maxwell Demon. There were pictures of the inventor and the

invention. The pictures showed good detail. The entire unit was made of sheet metal. The unit was to be cheap to build and inexpensive to operate. The report by the magazine gave it a good rating, as I remember I believe that the biggest problems were air velocity and noise.

It would be great if someone were to start a clearing house of ideas. I know that BSRF does operate somewhat along these lines, but I mean an organization that only supplies data and/or the source of data to researchers. And don't suggest that I do it. I am a bit old to accomplish enough. I tire a bit early and don't have the drive to see such an endeavor to a conclusion. I do wish that I had thought about such a thing about 30 years ago. Things that were impossible or impractical when first thought of, often become easy to do when brought face to face with newer techniques that were not available earlier.

Thanks for listening, and keep up the good works. I have said for many years that modern science should return to the works of Newton and others and locate the path that science should have taken. The path of the 'Puffers' was mistaken for that of the 'Master' and the result is the mish-mash we have today. The spirit has been forgotten and denied.

The modern scientist will soon have to recognize that there is more to the Universe than he/she now can imagine. Some of the Science Fiction writers know this and have been quite good at predicting the future. Most of our modern world was predicted years ago by one or another of the Sci-Fi people.

So, enough rambling from me—keep up the great work.

A. Maxwell Dudley
Westmont, New Jersey

Thanks for the info on various projects we've mentioned. An excellent 'clearing house' for ideas (besides BSRF) is Rex Research, P.O. Box 19250, Jean, Nevada, 89019. Rex has sent us his "Hilsch-Ranque Vortex Tube" file on 'Maxwell's Demon' with patents, articles and analysis of the vortex tube operation. Rex's catalog (\$2) is a must for any researcher.

GRAND CAVERN

The Grand Canyon cavern articles is/was excellent, but if that area is "off-limits" it doesn't show on any of the maps I've checked. Why did he

reference the cave as being 42 miles upriver from El Tovar Crystal Canyon? It would've been closer & easier to refer to the mouth of the Little Colorado River. The site also is not far from the "Sipapu" (Point of Emergence) mound sacred to the local Indians

Keep up the great work!

Bob Nelson
Jean, Nevada

We've been checking maps, including a detailed topographic map of the entire Grand Canyon area, and haven't discovered either the location or any area marked "off limits". However, the article we ran appears to be authentic and ties in with many facts and legends concerning caverns in the American Southwest. Any further info from readers will be greatly appreciated. We've had several offers from cliff climbers to check out the cave if we ever locate it.

GRAY ALIENS & THE WORLD'S END

Just got the recent issue. Haven't had time to get into it very far, but it looks like another real good one, thank you. I did get to read Alison's article, and I share the feeling that gray aliens are essentially sophisticated constructs intruding into several different levels of reality. Dave Emory had basically the same idea in his talk on UFOs, which was on the video I loaned you. I had not been aware of the history connected with Aleister Crowley.

Also, in "Fizix Korner," I was a little surprised that Peter would publish Gordon-Michael Scallion's dire earthquake prediction date for southern & central California. I think Scallion has lost credibility. This is not the first time his predictions have fizzled. For last October, he had predicted a 7.8-8.2 quake for northern California's coastal region.

Happy trails,
Ron Stinnett
Santa Rosa, California

Thanks for your comments. The Emory lecture was very interesting. I found an interesting quote for those who foresee great earth changes:

"He who foresees calamities, suffers them twice over."
—Beilby Porteus

Earthquakes and giant storms are on the increase, and change is an inevitability, so who is to say what is really in the future. If giant chunks of continents are going to start falling in the ocean I doubt anywhere on earth will be safe for a while. There are far more important

things to attend to, such as the internal ordering of one's consciousness and energy. Why worry about relocating based on a psychic impression which may or may not occur? The phenomenon should be studied. I would like to see an independent accounting of actual events (magnitudes, locations, dates, etc.) occurring on and at the forecast targets by psychics such as Gordon-Michael Scallion. Perhaps a probability gauge can be figured for future events.

CELLULAR ELECTRICITY

The American Public doesn't seem to know just what to do with the electricity discovered being generated by each cell in the human body by Georges Lakhovsky. Also the public has been told of the mytogenic waves or beams emitted by the human eye, but no one seems to have the foggiest notion of what to do with the mytogenic waves.

No educator has yet come forward to reveal the dynamic use for these four invisible and important energies. The four are electricity, mytogenic rays, crystals (living in our blood cells) and living magnets found in the human brain cells.

We call them all cells and once named we fail to recognise their dynamic potential.

Electricity and magnets can produce electromagnets. Crystals may be called amplifiers.

The invisible, educators no longer scoff at these invisible but proven cell energies.

How can they be used to assist a human realm? All these cells being alive makes me wonder, are they actually in charge of this body even more than we are. It may be best for us to cooperate. Let's find out for certain. But how?

Respectfully,
F.M. Moore
Bryte, California

THE FORTEAN ZONE

I am much gratified by the excellent review of my book, "The Lost Cities of Cibola", which appears in the third quarter issue of "Borderlands". It is most fair and informative as far as it goes, but I wish you had had space to discuss my treatment of the loess in more detail. As it is, you conclude simply that "... the loess presents us with a problem of great magnitude ... fertile soils which may have come from a nearby dimension, or density, of space". I would urge instead that

the loess is less of a problem today because it can now be said with certainty that it did precipitate into our world along another dimension of space.

Two separate points are involved here, the most important being the actual fact of this added dimension because we can expect it to have implications far beyond the loess itself. In truth a great many phenomena suggest added dimensions of space but most fall short of proving the case because they are, to some extent, equivocal—at least so materialists like to insist. For example, such people profess to believe that a Fortean event results when a waterspout picks up a load of fish (say) and drops them later at some remote location. Similarly they brand psychical phenomena as either outright hoaxes, delusions, or mere chance coincidence.

Unfortunately, none of these phenomena can be reproduced at will so it is impossible to prove them to everyone's satisfaction. The loess formations—and more particularly the calcareous nodules which are found in the loess—provide a way around this impasse because they are easily accessible to any interested party, and they are utterly inexplicable from the materialist's point of view. Indeed, so alien are these objects to orthodox geology that their structure is never even mentioned in the geological literature (at least I have never seen them described in any text or learned paper whatever, and I have read extensively in this field).

The mode of formation of the loess offered in my book explains (or easily provides for) every single detail of the loess and its nodules in perfectly elementary terms—terms, moreover, which require an added dimension of space. In the complete absence of any other explanation for these objects, then, it would seem that one must admit the fact of at least one other space-like dimension.

Of course, this has important implications in many fields of inquiry, some of which are mentioned in my book; others will be recognized wherever the bizarre or the ethereal intrude. In keeping with our traditional idea of the ether, as that quality of nature which transcends the grossly material, I would suggest that

it can now be identified more specifically as the manifestation of this (these?) other dimension(s) in our worldly plane.

Yours very truly,
Richard Petersen
Phoenix, Arizona

We enjoyed reviewing your book and realize that we could not present your ideas to their fullest extent due to time and space. It is hoped that interested parties will read the entire book, which really is an excellent presentation of an extra dimension intruding upon ours at certain times and places. The evidence is there ... and it is puzzling!

7 CITIES OF MYSTERY!

I appreciated seeing my ether-theory article in the last issue of **BORDERLANDS**.

In the issue, I noticed that you're personally interested in the Cibola stories and in geophysical anomalies in the Southwest. You might be interested in ideas I have developed in these two areas.

In the 1970s and early 80s, I spent

a lot of time traveling the Southwest, especially New Mexico, while working assignments there as a physician, and I developed some theories about the Cibola stories.

Petersen's theory that the seven cities of Cibola (which usually have been referred to as the "seven cities of gold of Cibola") were located near Phoenix and were wiped out in a great cataclysm doesn't strike me as having much evidentiary corroboration. Saying there is evidence of a cataclysm some time in the past is a long way from proving that it could have wiped out Cibola, even assuming the cities were located there. The fact that the following expedition by Coronado (much closer in time to the first expedition by de Niza than we are) set out to the North from Santa Fe, turning west at Bernalillo, and made for Zuni country in western New Mexico, makes it look to me like the "seven gold cities" were somewhere in that vicinity (Zuni country of New Mexico.)

It is a little-appreciated fact that

the Spaniards used the numeral "7" as the symbol for "gold," not just in maps and waybills, but even in official documents. Thus, the "seven cities of gold of Cibola" are translatable to "the gold cities (or perhaps 'gold settlements' or even 'one settlement' of Cibola."

There is established evidence that the Zunis buried very large amounts of worked gold prior to Coronado's arrival. Gold artifacts are known to have occasionally eroded off the side of a mountain in the Zuni reservation for a period of years afterward. To me, the most likely identification of the "seven cities of Cibola" would be that of one, or perhaps several, Zuni settlements, prior to the arrival of Europeans (when the Indians, realizing the gold would be a magnet for more Europeans) took haste to get rid of it. I don't think cataclysms or fourth-dimensional hypotheses need to be invoked to account for the Cibola story.

In the same article, you went into the mysteries of coal sediments. Coal

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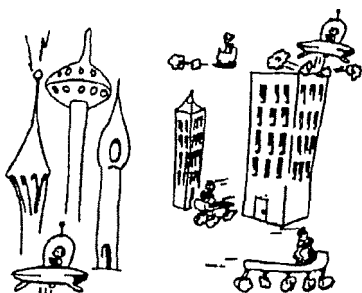
CREATIVE ALTERNATIVES

..... **For A Troubled World**

by Mel Saunders

Learn about non-chemical therapies and various natural remedies used in other countries with great success. Discover the real facts behind solar, wind, hydrogen and non-conventional energy sources already available to the world. Learn how to adopt healthier and more profitable organic farming & gardening techniques. Study the creative educational methods that could reduce crime, illiteracy and poverty in the U.S. Learn how to research and implement for yourself the many creative alternatives available in health, education, energy and agriculture that are currently ignored, ridiculed or condemned by world policy makers. If you like solutions, read ***Creative Alternatives For A Troubled World*** because it can furnish you with the research and reference material necessary to create a better life for your entire family.

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deposits do pose more questions at present than scientific answers, or even scientifically-coherent theories. While doing research for my book "Twilight of the Gods," I developed a theory for coal sediments. It is well known that marine fossils and fossilized trees are often found in coal seams. My model of coal formation is based on my study of a legendary world-eruptive prehistoric cataclysm whose darkened aftermath was referred to by ancient writers as the "twilight of the gods." This event was said to have antedated the more well known great Deluge. Ancient stories pertaining to the world-eruptive cataclysm relate that there were vast eruptions everywhere, followed by cosmic-force winds. Hindu legend states that such winds easily picked

up the largest boulders and carried them along. One mechanism for such winds would be that they arose because whereas the heat of the eruptions under the oceans would have been dampened by the waters, the temperatures over the great land masses would have been much higher. The great disparity in relative temperatures would have led to enormous atmospheric movements involving vast areas, lending tremendous force to the air movements. Presumably, as such winds swept over the land from the ocean, some of the ocean water would have been carried into the land area. The force of the winds conceivably would have swept up vast amounts of organic matter, perhaps entire forests, redepositing them as a single mass. If the place of deposition was one of the many erupting areas, an ongoing source of volcanic magma would have furnished the bottom heat necessary for the "smothered combustion" needed to transform the organic debris into coal. I believe the above is the first rational model for coal sediments and their associated fossil findings.

Reference: "Twilight of the Gods," International Guild of Occult Sciences, Palm Springs, California, 1992.

Sincerely,
Michael Baran
Brockton, Massachusetts

Thanks for providing us with your ideas on Cibola. As you would well know yourself, having authored several books, that everything presented in a book cannot always be described in a review. You brush Richard Petersen's evidence aside without regard and his evidence will not disappear so easily. If you can refute his evidence in favor of yours, rather than simple substitution, then there is room for a worthwhile discussion. Richard delves deeply into the physical evidence in the area, as well drawing on his knowledge of archaic Spanish dialects and other wide ranging disciplines. LOST CITIES OF CIBOLA as a whole document is an excellent piece of extrapolation from physical evidence. Fray Marcos de Niza, top agent for the Francis Order in Mexico, gave an eyewitness account of Cibola, later recanted under mysterious circumstances. The Church of Rome legally owned the "New World", according to some interpretations of European law, and this was franchised to Spain and Portugal—this was a very serious accumulation of wealth and souls. Until de Niza's detailed eyewitness account can be refuted by a ratiocinative approach it has to be considered as *prima facie* evidence of Cibola's

existence during the mid 1500s.

Your ideas on coal formation are very interesting and provide a basic logic. But how do you account for the multiple layers of coal, each apparently being a distinct formative "event", which number into the hundreds at some locations? And these mixed multiple layers of coal and rock are known to be pierced by other objects, in one case a vertical petrified tree appears to intrude on several million "years" of sedimentation from below (or the layers fell from above). I don't think any of us have exact answers to this (if I'm wrong let me know) but let us discuss this further and see where we get. I'd sure like some answers on how exactly the earth was formed.

But I shall let Richard Petersen reply to your letter:

4TH DIMENSIONAL COMETS

I am confident that Mr. Baran would have been more sympathetic to my thesis if he had taken the trouble to read it. In that case he might have discerned an interesting connection to a point that he himself raised in the previous issue of *BORDERLANDS* (No. 3, pp 26 - 27, 1993). In his final paragraph, Baran draws attention to Immanuel Velikovsky's conclusion that the planet Venus was initially a comet (because it 'wore a beard' in ancient times). This is surely a matter deserving of comment.

In my book I offer evidence that comets are in fact objects in four dimensions. Far from being 'dirty snowballs' as is now commonly believed, their main substance lies outside of our worldly plane so they appear to our eyes as 'holes in space' which emit gas and dust in profusion. The question naturally arises as to how such an object would behave on colliding with a planet.

The structure of the loess provides a clue (if this strange material did indeed derive from a comet as I conclude in my book). At least in this case, no identifiable impact crater is in evidence so relatively little energy was dissipated during the collision. This implies that its effective mass as a comet was very much less than the mass of loess which resulted from it! The comet survived the impact, when, no major explosion resulting, and bound by gravity to the earth it retained for a time its bizarre properties intact.

If this behavior is typical then most probably Venus never was a comet at all. Instead, it captured the comet which appeared from afar as

Deadly Doctors!!!

Editor—As previously reported, the 1990 Harvard Medical Practice Study suggests that each year 150,000 people die from the negligence of doctors. Since there are about 300,000 doctors in the U.S., that means each year approximately one out of every two U.S. doctors kills a patient negligently. Over a 30-year career, this could mean the average doctor would kill 15 patients.

Since there are about 200 million guns in the U.S. and about 30,000 people die annually from gun assaults, suicides and accidents combined, each year an American gun has a 1 in 6,666 chance of killing someone. This means that any doctor, any year, is 3,500 times as likely to kill someone as any gun. Even the raw numbers are astonishing, doctors kill five times as many people as guns. Think about it! Should we be turning in our guns or turning in our doctors? Come to think of it, why is the AMA pushing gun control? Why not doctor control?

EDGAR A. SUTER, M.D.

Doctors for Integrity in Research & Public Policy
San Ramon

Exact source unknown, California based paper, Summer 1993.

Credit: Frank Brown.

its beard even as the Earth captured the comet which brought forth the loess. Presumably Saturn captured the comet which produced its rings in the same way.

It is interesting to note that a string of several comets is due to collide with the planet Jupiter in July of 1994—unfortunately on the side away from the Earth so the actual impacts will not be seen. But prevailing opinion has it that these objects will explode so violently on impact that the Jovian moons will be visibly illuminated by the resulting flashes of light!

Drawing a lesson from the loess and the erstwhile beard of Venus I anticipate that no such illumination will be observed. Identifiable cometary forms may be visible afterwards at the limbs of Jupiter, but one must keep in mind that the surface of this great planet is very much different from that of Venus so the outward manifestation may not be at all the same.

Yours very truly,
Richard Petersen
Phoenix, Arizona

After receiving the above correspondence we then received the When Venus Wore A Beard article for this issue from Richard Petersen. We have run it all as it is a prime bit of borderland research. Richard has taken physical evidence and followed it to a conclusion beyond the dimensions we are aware of through the senses. Further debate on the subject is most welcome!

RADIONIC INSIGHTS

Dear Peter Lindemann/Fizix Korner: I am unsure about your lingo of "real" information and "true" information but I would like to speak to the issue of the "false negative" in radionic analysis. I first noticed this phenomenon when testing the chakras. Since I am able to see and adjust the chakras psychically, I quickly became aware of the inconsistency between what the equipment registered and what I perceived—an interesting note for those who insist radionic practitioners "create" the response we think should register. (As a side-bar: most chakras in most people need work, in my experience. Radionic and other equipment which "read" chakras are generally inaccurate, not sensitive enough, testing something different, or giving a false negative. At the Psychotronics conference this year,

one exhibitor had a hand-held device which, it was claimed, reads the chakras. I walked up to the table just as a man was being told his throat chakra was fine. I could see the man's throat chakra was over one of

his shoulders, closed, and a deleterious color. Anything more wrong with it and he would have been hysterically mute. By coincidence—if there is such a thing—I happened to be speaking to that same man later in the night and adjusted his throat and other chakras. He felt such a dynamic difference he could not thank me enough. A body worker at the conference also helped with physical adjustments that I could see had a positive effect on the chakras.)

In my belief system, radionic equipment generates subtle energy forms and a positive reading on the equipment means the holistic person (or animal, plant, or mineral) being analyzed/treated is accepting that energy form or is in harmony with it. It does not mean that to which the energy form is said to relate is "real" or "true." A negative reading (true or false) means the holistic person is not accepting the energy form or there is no harmony. With the chakras, a false negative can usually be attributed to an emotional block which prevents a chakra from being vital, accepting, transforming, generating, and radiating energy. When I adjust a chakra, it will then accept the radionic energy but if the person will not deal with the emotions stored therein, the chakra will not heal. If you are unable to make psychic adjustment to the chakras, it may be good to know that radionic equipment from Copen Laboratories is able to treat the holistic person on different energy levels. This function gives you the ability to activate the chakras on a higher level ("through the back door" as I call it, where the emotions cannot block),



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then switch back down after a moment to find the chakras accepting energy. Once again, if the emotional work is not done, the chakras will not heal. I have not worked with the SE-5, but my experience of it is that the energy is too harsh for this protocol, too crude, and does not treat on levels above the etheric-double. However, if users of the SE-5 are unable to get energy into the chakras, you may try treating them in the aura at a distance of a few feet from the person, or with a homeopathic potency.

As for the false negative reading for copper toxicity, I have a simple solution that has worked quite well for me: make a homeopathic-homaccord remedy of cuprum metallicum in composition with other substances which bind with (and thus may block the reading of) copper. Then, instead of testing for copper toxicity, merely test whether the person needs the remedy for copper toxicity. Do this also with aluminum, cadmium, and lead as they can also be a problem (sometimes a greater problem).

I do not know exactly why the detection of copper seems to be blocked but there may be a clue in the witness used for analysis. When Ruth Drown radionically photographed internal organs of the human body, she would receive a picture of the inside of the organ if she used blood as the witness, but the outside of the organ if she used hair. Since metal toxicity lodges deep in the tissue, you may need a blood sample and careful analysis to detect it. I realize some practitioners use a hair sample or photograph or

dermal-electrical connection and this could contribute to problems with certain areas of analysis. Since I only use blood or hair-and-blood together, and since I test for the acceptance of a copper toxicity remedy, I do not feel I have a problem in this area and cannot comment more on this point.

The color violet is very cleansing and I use it to remove heavy metals, cancers, and other toxicity. Your violet filter for analysis must be cleansing the mask of the false negative, not shining a light through it. The possibility of a multi-color filter for analysis does not seem too problematic for radionics, but maybe a multi-color pretreatment to analysis would be simpler. I will consider this. Best,
Roy Anthony Shabla, Ph.D.
Downey, California

BREATHE!

I recently saw your video on the "FIVE RITES" and I wanted to share my perspective on it with you. First of all, CONGRATULATIONS!!! on sharing on such an easily assimilable form such priceless information!

I was first exposed to this from the book "ANCIENT SECRETS OF THE FOUNTAIN OF YOUTH". I have been practicing it zealously for about 4½ yr, with great results! I'm now 46 and my life was at its energy lowest at 40, and it's been up-hill ever since, thanks to the five rites and more recently, to a multi-wave oscillator.

In doing the 5 rites all these years, I was trying to intuit how it got the chakras spinning faster. About 1½ years ago, I "got it". There are 2 essential interactive ingredients, and your video mentions only 1 of these two, thereby dropping the potential effectiveness of the 5 rites to about 20% what it could otherwise be.

The 2 essential interactive ingredients are: body posture & breathing. Your video makes no mention of the breathing!

Here's the understanding that I intuited: Inhaling builds up a charge of prana or chi or life-force, and then the body posture determines where that prana is stationed. That is, inhaling builds up a potential energy which is stored according to the particular body posture. (By the way, these comments on breathing do not apply to Rite #1, only to rites #2-5.) Then as you exhale as you are coming out

of that body posture, you are forcibly forcing the accumulated prana out through that part of the body, and this is what makes the chakras spin faster! As the potential energy becomes kinetic energy ("the ability to do work") this kinetic energy is released from its stored position in that particular part of the body, depending on which of the positions you are in. As a foot note, in my understanding, you are supposed to inhale as you enter into the position, hold your breath as you maintain that position, and exhale as you come out of that position. It's a bit like those toys that you blow into and make a propeller turn. The harder you blow, the faster the propeller turns. So it is the synchronized interaction of breathing and moving into and out of the body position that causes the chakras to spin faster. Breathing by itself is just prana yama. The body positions by themselves are just hatha yoga. Together, in phase-locked synchronization, they are the 5 rites, that cause the chakras to spin faster, thereby i n c r e a s i n g youth and vitality.

In cognizing this, I immediately started taking the breathing part of this much more seriously. I would inhale to the max when getting into each position and I would exhale forcefully when coming out of each position. This seemed to triple the benefits I

was receiving from the 5 rites. Now, as I exit each position and exhale forcefully, I can actually feel this to cause the chakras to spin faster. Each position of course effects different chakras.

And finally to mention the essential importance of inhaling as one enters each position, holding the breath as one maintains that position, and exhaling forcefully as one leaves each position.

Keep up the great work!

Iasos

INTER-DIMENSIONAL MUSIC
Sausalito, California

PARAPYSICS ANYONE?

I would like to find out whether



SPIRAL SURPRISE

"Remarkable new infrared images of one of the closest and most-studied galaxies show an unexpected feature that challenges the accepted theory of how spiral galaxies operate. Using a new generation of high-resolution electronic infrared cameras, Dennis Zaritsky of the Carnegie Institution in Pasadena found that the spiral arms of the familiar Whirlpool galaxy wind their way far deeper into the galaxy's core than thought possible. Regular photographs indicate that the dust-cloaked core is a solid blob of stars. Theories based on those photos suggested that a resonance in the core absorbed the density waves that created the spiral arms, preventing the arms from extending into the core. These new images, made with infrared light that passes easily through the core's dust, show the arms whirling deep into the core. This is pushing astronomers to explain how the arms—and the density waves believed to create them—can penetrate so close to the heart of the galaxy."

Source: Los Angeles Times, July 23, 1993.

Comment: A clear example of the dominant implosive nature of most galactic organisms. Thankfully, the functioning of galaxies is not dependent on current theory.

you might be interested in some of my findings in parapsysics or, as I choose to term it, parakinetics, which involves the various physical laws inherent in the solar system, both heliocentric and geocentric: i.e. velocity, gravity, momentum, 1st order moment, etc., as such relates cross-time; ex., decess date to manifestation date.

I began this type of research going on some 25 years ago — doing it all in what now seems 'cart before the horse' or backwardwise and after what must have amounted to consumption of a stack of note-paper up to my chin(s) — and discover it lead back to two basic observations in physics and astronomy: (A) the expansion of the universe (= radial velocity factor); (B) the formula of equilibrium of the planetary orbits. The cross-time relationship, as well as synchronous relationship, shows up through vector direction correspondences, the latter arrived at via summations. The velocity and gravity summations are 'Mercury-critical' and to some extent, 'Mars-critical' so that I had to erect tangent correction charts for the more elliptical orbits of Mercury, Mars, Pluto. The reduction of the orbital equilibrium formula leads stepwise to two final stages.

To be quite frank, I am quite worn out and getting old (soon 70) and frustrated in my lengthy attempts (not to mention expenses) to find an organization that would show the least interest in my work and findings. So, if you are truly interested in examining my work and results, do contact me and I shall mail you some materials. Also, I have works dealing with earthquake timing, explosion potential, presidential elections, which likewise entail the gravitating systems.

Sincerely,
(Mr.) Marion 'Sonny' Young
Orange, Texas

We spoke with Mr. Young by phone and he says that those who are seriously interested in his work, and have the time to delve into the complexity of it, can contact him via Borderlands and he will supply further information. Borderlands is, of course, interested in any serious research, but it is hard to keep up with all the information flowing through here. We need condensed, concise, clear extrapolations of theories and records of experiments to publish.

Judged by its Cover!

A listing of books, videos, magazines, etc, received for review ... full reviews of selected titles may show up in future issues depending on available time, interest and surging cosmic forces... Here we generally just list 'em and judge 'em by their covers...

UNDERGROUND BASES AND TUNNELS: What Is The Government Trying To Hide?

by Richard Sauder, P.O. Box 81543, Albuquerque, New Mexico 87198, \$25pp. This is an exceptional piece of research into the reality of underground bases in the Americas. A lot has been claimed on this subject, with persistent but unverifiable stories of nasty gray aliens working with corrupt U.S. forces underground, but this book is not about that. This is a review of actual federal documents on underground and potential underground bases. Lots of good factual materials on actual underground sites and also how they can be constructed. Includes info on tunneling, underground power sources, geological considerations, and more. Did you know about the deep sub-basements of the White House? A worthwhile addition to any researcher's bookshelf.

NATIONAL SIGHTING YEARBOOK 1992

Data on 1441 UFO sightings from 1986-1992, by Paul Gerrughelli, National Sighting Research Center, 60 Allen Drive, Wayne, New Jersey 07470. \$9, on disk \$10 for IBM disc. A well organized compilation of essential data. A must for UFO researchers who want hard data.

SPIRITUAL ENERGY AND TECHNOLOGY —

Understanding the Relationships
by Michael Thau, \$12.95, distributed by Metaforms, P.O. Box 2262, Boulder,

Colorado 80306, (303) 449-5918. This is an interesting collection of articles and interviews with various researchers covering subtle energy technologies such as Music, Color, Gemstones, Geometric Forms, Inert Gas Technology, and more. A very intriguing collection of information. Just in, hope to check it out a bit more.

EDUCATIONAL RADIONIC WORKBOOK

by Rev. Caroline Conner, P.O. Box 1002, Melbourne, Florida, 32902, (407) 727-1117, \$32.50. This is the kind of book we always like to see available, it is a how-to-do-it-yourself manual. It starts with detailed instructions on how to build and use a Hieronymus-type capacitor tuned radionic unit. The book then moves on into gem therapy, color, music, vibrational healing, orgone info, and a fair bit of related material. Some of the information may appear too metaphysical for some, but there is enough hard radionic information to make any researcher appreciate it. The building instructions alone are a good reason to get this one.

FANTASTIC INVENTIONS OF NIKOLA TESLA

by Nikola Tesla with additional material by David Childress, Adventures Unlimited Press, Stelle, Illinois. \$16.95, ISBN 0-932813-19-4. Lots of good original Tesla materials, but I wonder how someone can compile Tesla's own words on how his inventions work, and then put completely contradictory goofy scalar transmitter pictures in following—fortunately, they only take up a couple pages. The added materials are a bit on the sensationalistic side and add little to the actual understanding of Tesla's inventions, but there is enough actual Tesla here to make it a good reference book for your library.

INTERNATIONAL SYMPOSIUM ON NEW ENERGY

edited by Maury Albertson, published by the International Association for New

Sciences (IANS), 1304 S. College Ave., Fort Collins, Colorado. An amazing cacophony of information! Covering the spectrum from serious research to outright goofiness, this book is a good reason to reject the "open forum" concept for conferences. For those who collect stacks of papers based on theories and philosophies, this one is for you. Don't get me wrong, there is some good experiment-based material here, you just have to sift through over 500 pages to find it. Save a tree, think these things out for yourself.

Book Review by Jorge Resines:

AWAKEN HEALING LIGHT OF THE TAO

by Mantak Chia

Healing Tao Books, P.O. Box 1194,
Huntington, New York.

In this massive (560 pages) new work, Mantak Chia completes and extends his teachings on practical — "hands-on" we

would say in Argentina — procedures and exercises designed to increase the quality of health in the individual. He couples his well-known techniques of visualization, massage and creative imagining to produce "chi-flows" in our internal organs by means of both the external Acupuncture meridians and "chi-channels" existing within the body that serve to distribute it to our organs. Most important of all, Mr Chia also indicates how the "chi-flows" in our environment change according to the different seasons and how this affects (both for good and bad) our internal organs as each is associated to a planet of our Solar System and, in turn, said heavenly body is influenced by the different constellations. Also, his most interesting comment is that energy must flow through the body and not be stored in it in excessive amounts. His opinion is that an excess is as bad as a deficiency. He comments on the already widely-known "negative side of existence", i.e. the many assaults we have to undergo when living in an artificial environment and how all of them accumulate in our organs to both reduce their quality and capacity of work. Following this come many different ailments that are treated by allopathic medicine through the sale of medicinal drugs at great profit. But as it would be also detrimental to our health the sudden elimination of all accumulated

poisons, he advises it is better the slow draining of these "toxins from daily life" and teaches the exercises necessary to achieve this goal. In this he remembers the functional nature of our body, a scientifically proven by Dr Wilhelm Reich, for the body must recover stage-by-stage from the abuses to prevent undue damage to our health. The benefits to be gained from the exercises he describes how to do are not only physical, but spiritual as well. He indicates that a healthy and balanced body — coupled to the same kind of mind — allows us to extend our awareness into higher spiritual realms so that our new "stretched mind" may not return to the former "compressed" state. All in all, Mr Chia — throughout his whole work — combines qualities that are maintained to be unrelated by the common, materialistical, scientific/medical community. However, there are qualified, professional MDs working with him who have undergone his training and practise regularly the exercises he promotes. In so doing, they can help their patients much better than the average "allopathic-MD" who never proves in him/herself the drugs prescribed to his/her patients... In short, whether you are just a layman like me, a scientist, an MD, or anything else in the walks of life just try practising the exercises described in this work. You won't feel disappointed...

CONTACTS

Borderland pen pals wanted, to discuss alternative scientific theories. Contact: Sid Briscoe, P.O. Box 26, Lexington Park, Maryland, 20653

Mexican Biologist Borderland Researcher seeks scientific relations with other Mexican Borderland Researchers, Enrique Ortiz Dávila, Paris #631, Col. Jardines del Cupatitzio, 60080 Uruapan, Michoacan, MEXICO

Audio/Video tapes on UFOs, Crop Circles, Face on Mars, Life after Death, and other fascinating topics. Free tape list and sample newsletter from: The Eclectic Viewpoint, Box 802735, Dallas, Texas, 75380

Electric power generation methods: Data exchange including experimentation. Write: Alexander Peterson, 11,200 Gravois-C, St. Louis, Missouri 63126

ANNOUNCING!!!

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Borderlands, Box 429, Garberville, California, U.S.A.

SOLAR FIRE

If you're interested in astrology and are thinking of buying some software there's a new package on the market well worth considering. Called *Solar Fire* this new state-of-the-art program was created in Australia by Graham Dawson of Esoteric Technologies. If you've had experience with previous astrology programs and have been put off by their complex and difficult data entry, it's time to check out something new. Designed for Windows on IBM-compatible computers, *Solar Fire* is extremely easy to use. There's no more clunky and complicated set-up. Easily installed and with a simplicity that a novice or expert astrologer will appreciate, this program will cover all your basic astrological needs with the click of a mouse.

The charts are high quality and resolution - you can change fonts, and colors (great for color printers). You can view charts clearly on screen up to quadriwheels (four charts in one), and aspect grids. Many selected reports are optional - now these aren't interpretative reports but listings of chart analysis details, and along with the conventional planets, seven asteroids plus Vulcan are included. There are database files for saving charts and you can add to the extensive list of locations already on file. You can customize aspect sets and chart points to get the type of chart you want. Something we like is being able to copy charts directly into Windows word-processing, publishing or drawing programs, although from the chart pictured this is one feature that will have to be worked on. Although *Solar Fire* does not contain the detailed research capabilities of other programs on the market, additional features will be available in the upcoming version, and at the price, it would be hard to find a better deal.

SOLAR FIRE, Version 1.2, \$195. Demo disk \$10, refundable with purchase of program. For more info call 1-800 843-6682 or write **ASTROLABE** Box 1750-B, Brewster Massachusetts 02631

Fidel Castro
Natal Chart (2)
Aug 13 1927
2:00 AM EST +5:00
Colonla Biran Cuba
20N33 07SW55
Tropical Zodiac
Placidus Houses
True Node

SOLARSCOPE

If you're curious about the movements of the planets and their changing relationships here is a pocket-sized tool (or toy, it's educational and fun for kids too) to help you appreciate the wonders of the Universe. It's a novel way to view the Solar System no matter where you are, day or night, indoors or out under the sky.

The Solarscope consists of a coated metal wheel the size of a CD on which small round

colored magnets can be positioned and moved to create a visual representation of the Solar System for any given date. As well as seeing the planetary positions you can also observe the rising and setting of the Sun, Moon, planets and constellations, compare natal and other charts with planetary configurations, and view the Solar System either geo- or heliocentrically.

Each Solarscope includes 1 year's worth of Ephemeris Cards (tables giving the daily positions of the planets) and a transparent acetate which can be placed over the wheel for comparisons. For an extra \$5 the positions of the planets from your own Natal Chart on acetate can be ordered. Also included is a stargazer to help you identify the constellations in the night sky. Individually handmade, each Solarscope is a small work of art, a great aid for the student of astrology or planetary researcher.

SOLARSCOPE \$19.99 plus \$5 postage. 4650 St-Urbain, Montreal, Quebec, Canada H2T 2V8. Phone: (514)849-0215 Fax: 849-8199

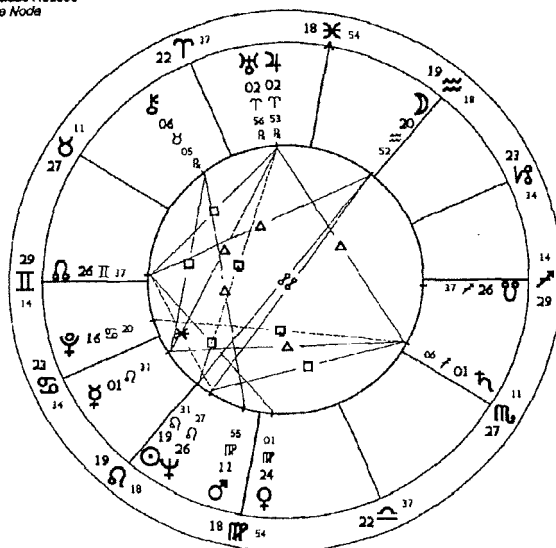
I.D.E.A. — INTERNATIONAL DATA EXCHANGE FOR ASTROLOGY

Serious researchers seeking accurate astrological data now have a large databank available thanks to the efforts of The International Society for Astrological Research (ISAR). IDEA has 32,481 entries in 305 categories on 15,173 people and events. So far there are 145 vocational categories, 88 noteworthy categories (eg accidents/crime/medical), 34 human interest categories, 36 relationship categories and 2 mundane categories. IDEA data is delivered in a printout showing all categories, sources, and notes for each individual listed, with birthdata on disk optional for large orders. The data is not in horoscope form.

IDEA 1993 catalog is \$3, deductible from first order. Write **ISAR**, P.O. Box 38613, Los Angeles, California 90038-0613.

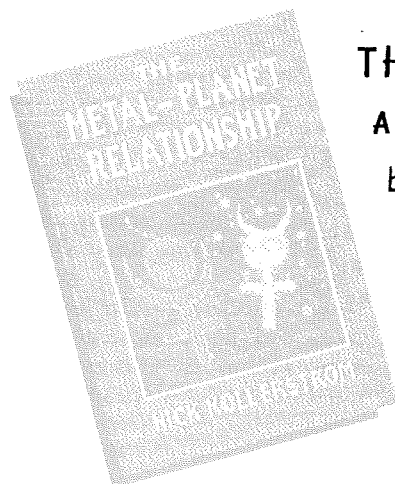
The above chart was electronically cut and pasted from *Solar Fire*. This feature appears to need some work. The chart below was a hard printout and rescan into our typesetting program. The printed charts are excellent.

Fidel Castro
Natal Chart
Aug 13 1927
2:00 AM EST +5:00
Colonla Biran Cuba
20N33 07SW55
Tropical Zodiac
Placidus Houses
True Node



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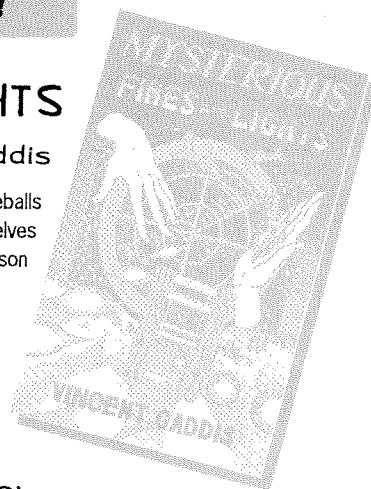
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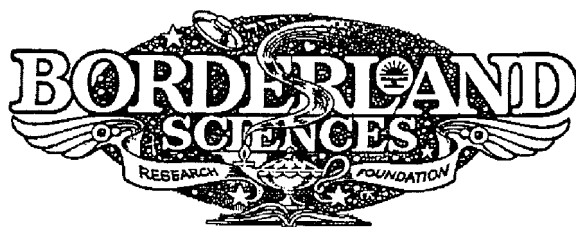
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